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Learning society and low unemployment: education and training in low unemployment countries

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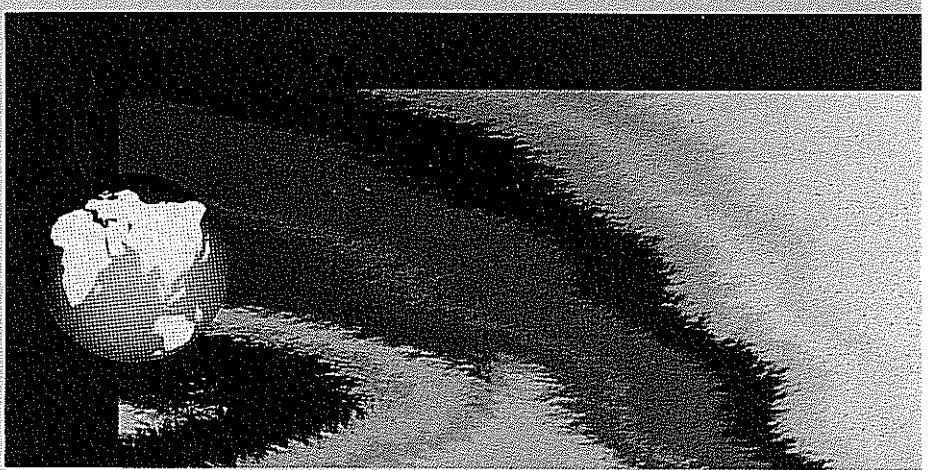
Learning Societies and Low Unemployment



Education and training in low unemployment countries

LEARNING SOCIETIES

AND LOW UNEMPLOYMENT

To my Mother

and the memory of my Father

- for the gift of learning.

IRISH MANAGEMENT INSTITUTE

Learning Societies and Low Unemployment

Education and training in low unemployment countries

ANTO T KERINS

IRISH MANAGEMENT INSTITUTE
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ABBREVIATIONS

APSDED	Asian and Pacific Development Programme, ILO.
BhS	Higher level vocational school, Austria.
BmS	Middle level vocational school, Austria.
CDIP	Conference suisse des directeurs contonaux de l'instruction publique, Switzerland.
CEDEFOP	European Centre for the Development of Vocational Training
EC	European Community
EPF	Federal Institute of Technology, Switzerland.
FDPE	Federal Department of Public Economy, Switzerland.
HRDC	Human Resources Development Council.
ICE	International Conference on Education, UNESCO.
ILO	International Labour Office.
NEDO	National Development Council, UK.
OECD	Organisation for Economic Cooperation and Development.
OFES	Federal Office for Education and Science, Switzerland.
OFIAMT	Federal office for Industry, Arts, Crafts and Labour, Switzerland.
QC	Quality Circle
SME	Small and Medium Sized Enterprise
UNESCO	United Nations Educational Scientific and Cultural Organization
VET	Vocational Education and Training.

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FOREWORD

By R J Lawlor, Director, Dublin College of Catering.

The problem of unemployment in Ireland has been widely recognised as the greatest single blemish on our social and economic environment. Its negative effects are so pervasive that any study which contributes to a greater understanding of the causes of unemployment and offers guidelines to approaches which may lead us out of the difficulty is to be greatly welcomed. In this regard, Anto Kerins' book makes an important contribution.

Its pragmatic approach of focussing on countries which have largely avoided unemployment at a time when many developed economies have foundered is especially welcome. There is much to be learned by studying the systems of Austria, Norway, Japan, Sweden and Switzerland. The fact that they are not homogeneous in the solutions they appear to offer is in itself a great benefit.

The most interesting aspect of this study is the detail it provides on the education and training systems of the five different countries. Austria, with its strong social partnership which has impacted on the development of its education, contrasts with the Swiss decentralist system where its primary and lower secondary schools can vary significantly between adjoining cantons. Japan's emphasis on academic education is quite different from either Sweden's or Norway's where encouragement is also given to those who feel inclined to take a vocational route.

Despite the variety of systems, which is very evident in the pages which follow, there is one noticeable similarity between the five. Education in any country is normally seen as important by two groups of people - those who provide it and those who use it - the usual teacher/school pupil/family axis. However, the present study indicates that society at large in the five countries also places an importance on education which seems to be somewhat unusual. Anto Kerins' classification of the five as learning societies arises partly from this emphasis along with the relatively high quality of education in the five.

For those who are interested in, or involved in the question of unemployment, I warmly recommend this study.

PREFACE

I write this preface to Anto Kerins incisive study as many of the world's major economies seem beset by low or even negative growth patterns, as traumatic as the deep recession that followed the global convulsion of the Second World War. Uncertainty and doubt about the validity of previously accepted economic theories abound, as Governments seek ways and means of coping with the stall and stutter of employment patterns, with the sharp fall of asset prices and property values and with widespread currency instability. Within the EC, the European Monetary System, designed as the vehicle of monetary stability and the engine of fiscal convergence, has shown itself to be vulnerable. The effects of divergent political views and opportunistic raiding by market speculators, preying on weaknesses in individual currencies, or in the structure of the EMS, have caused serious problems.

Here in Ireland unemployment hovers around 300,000 with 17.6 per cent of our workforce unemployed. Provision of unemployment therefore, heads the Government's priority agenda. Government employment policy, supported and partnered by employers and trade unions, consists of a three-strand approach: firstly, a sound macroeconomic base of low inflation, moderate wage increases, improved competitiveness, control of public finances, total commitment to the ERM and so on, is the solid foundation; secondly, sensible structural reforms such as lowering tax rates and widening the bands, restructuring of corporate taxation, indirect tax changes within the context of the European Single Market, EC backed training schemes, the positive linking of industrial grants to employment; and, thirdly, on the ground the twelve area partnership schemes and the County Enterprise Partnerships Board, with the expertise and counsel of the reorganised Development agencies. The "Programme for a Partnership Government 1993 - 1997" contains a significant range of important new policies focused on the job problem. For example the National Economic and Social Forum has now been set up and part of its brief is to form a national consensus on the unemployment problem. One of the many other policies included in the Programme is a Jobs and competitiveness Project which was first

suggested by Anto and is referred to in the final chapter of his book. The Government's Programme contains the most comprehensive strategy devised to date, and it clearly portrays the Government's determination to bring the full force of consensual national endeavour to bear on the provision of employment.

Unemployment may seem intractable particularly in a recessionary climate when traditional labour markets for Irish citizens have battened down the hatches, thus exacerbating the effects of demographic trends on the Irish employment market. Anto Kerin's book is suffused with one strong tenet: unemployment can be beaten back and employment can be assured, by taking the necessary steps to ensure it.

Very few countries have succeeded in keeping unemployment at a satisfactory level. In 1989 when I held the labour portfolio, I decided to encourage a study of five countries which had consistently achieved low levels of unemployment since the 1970's. The latest OECD data for 1993 still finds the same five as the main performers in the area. The present publication is the result of this study.

The original research had two main goals: Firstly, to list some of the more important reasons for low unemployment in the five countries, and then to identify the most common causes. Secondly, to look at their education and training systems to see what we could learn from them. The finished study shows that there is no holy grail, no simple formula for solving unemployment. Each of the five countries took varying approaches to the same problem. There are however, two important common themes among the five. Firstly, each country seems to have a relatively well-developed education and training system, and all have exhibited a strong determination over the years to keep unemployment down. Following the analysis of the five, the study provides us with an interesting group of recommendations which add considerably to our range of options in the area.

As Minister for Finance I was interested and not a little concerned, at first, about the finding that all five countries displayed a strong determination to reduce unemployment. If high unemployment in countries such as Ireland is partly due to a lack of grit, then surely, I thought this essential element could easily lead to further pressure on the Exchequer. After all, more 'determination' often translates into more public expenditure. However, Anto's

point is somewhat different. He argues that low unemployment is facilitated by a determination at all levels in a society to give priority to employment - in the factory, the community, the county, in the region, the office and workshops. Political commitment at all levels in different societies and systems is shown to provide considerable employment opportunities and benefits.

For, me this particular finding is the most important one. For as long as I have been in politics, I have believed unemployment can be tackled and beaten. Everywhere I go I am asked about work and unemployment. In my constituency where I see its effects daily; in the Dail with my parliamentary colleagues; at the Council of Ministers meetings in Brussels and in international forums such as the World Bank or the OECD. Everywhere people want it solved. Everywhere Governments seek to solve it. For many its like a big black cloud which they hope will go away, somehow, someway.

Unemployment may be a difficult problem but it is not like a dark rain cloud over which we have no control. Unemployment is part of society. It has to do with the way we think, how we view social responsibility, how we adjust our expectations to traditional formulas. Unemployment has to do with the way we run our factories and schools, or communities and colleges, our unions, our public and private bodies. It is not part of what we are, it is only part of *what we do*, and this we can change. This publication provides us with many useful pointers for change necessary to move positively back on the road towards full employment.

I commend Anto highly for his assiduousness and perseverance in sticking to his task through thick and thin. The grit he portrays as an essential element of our response to unemployment is evident in his efforts to see this book published and its thesis widely disseminated. His book is a most positive contribution to the great national debate on a great national problem. I'm convinced that Anto's contribution will be seen to have greatly aided our understanding of the origins of unemployment, and will therefore help us to find practical and long-term solutions to this great national challenge.

Bertie Ahern, TD
Minister for Finance.

1 INTRODUCTION

The purpose of this study is to consider the different approaches by Norway, Sweden, Japan, Austria and Switzerland to the education and training of their workforce. The five countries were chosen partly because of Therborn's study which identified these as the consistently lowest unemployment countries in the OECD since 1973. The 1993 unemployment projections for the five vary between 1.4 per cent for Switzerland and 4.8 for Norway indicating their continued success in this area.[1]

The quality of a country's human resources makes an important contribution to the efficiency of any economy. According to a major US report knowledge, learning, information and skilled intelligence are the new raw material of international commerce.[2] The Japanese, who are renowned for their highly developed economy, are well used to delegations of foreign businessmen going on 'catwalk' tours of their production sites where they take detailed notes of the equipment and new technology. However, according to some, the delegations are rarely encouraged to focus on the work patterns, skill learning and organizational structures of these companies. A senior Japanese executive has said that the way they organise and develop their workforce gives them their competitive advantage over western firms, 'so from now on this is our top corporate secret'.[3]

Unemployment

A lot of factors, some still not well understood, can contribute to unemployment. These range from a weak industrial base to recession, from seasonal factors to a strike prone economy and so

on. Economics as a discipline has been, at least until recent times, theoretically confident at explaining unemployment. A major part of this explanation related to the explanation of the output-employment relationship at either the level of the firm or the macro-economy. Classical or neo-classical microeconomics had detailed the relationship at firm level and Keynesian or its neo-Keynesian successor at the macro level. However, the confidence has received a hard knock by the doubts expressed by those who point to such concepts as hysteresis or the insider-outsider paradigm. When output falls unemployment rises and, according to the traditional economics view, will fall again when output rises again. However, the actual evidence and these new concepts say otherwise and unexpectedly high levels of unemployment continue to persist despite the renewal of output growth.

Because of these well documented difficulties within economics in providing effective solutions to unemployment, we must set out on our own without the comforting support of a clear theoretical compass to find relevant ways of reducing unemployment. An idea worth considering is that some countries' industrial relations, training, education, etc. systems may be more employment efficient than others and part of the role of the present book is to begin the investigation of this idea in the training and education area. The quality and efficiency of a country's human resources can make an important contribution to the strength of an economy and therefore the level of employment. Improving the quality of human resources in an economy can have two different but related effects on the level of unemployment. First, the quality of the workforce impacts on the scale and capacity of economic activity. The better the quality, other things being equal, the greater the value of overall output and employment.[4] A constant complaint about weaker economies tends to be the relatively inadequate size of their indigenous economic base and Ireland is a case in point here. A weak indigenous base is partly explained by the poor quality of its overall labour force, including both employed and unemployed.

Second, an improvement in the quality of our human resources improves the employment efficiency of an economy. By employment efficiency we mean that there are characteristics of a system which make it, for the same level of output, more effective in employing labour.[5] For example, a £100m worth of turnover can employ more or less labour depending on the balance between

labour costs and productivity - this is already part of economic orthodoxy and not at issue here. However, this approach does not adequately account for the dynamic relationship between employment and labour productivity.

The standard analysis relates to an external labour market where employers, as it were, 'look out' at the labour market and decide whether to employ staff from the market or make staff redundant and let them go back out into the market. Workers are employed in this analysis on the basis of the firm's output needs and the present labour cost/productivity balance. However, the analysis is less relevant in a scenario where:

- A firm considers its work force to be the strategic input which provides it with a significant element of its competitive edge.
- Any unit of labour can have a fixed productivity level at any point in time for doing a particular job. However, this productivity can be improved by periods of learning on the job which increases its value to the firm.

In this alternative scenario the rational firm looking at a potential recruit need not just take a static labour cost to productivity approach. This is because the firm may decide to employ productivity potential and ability to learn rather than just present productivity. Therefore, to the extent that firms in an economy calculate into their employment decision the fact that the labour input is the strategic input, along with an allowance for labour potential, then overall employment can be slightly greater for the same level of output. In addition, labour retention can be greater for the same relative fall in output if an employer takes into account:

(a) the viewpoint that the output fall may be temporary and the cost of laying off and taking on again exceeds the retention cost;

(b) the view that laying off a worker may lose the company a reliable input who has built up a wealth of company specific knowledge and who would be difficult to replace easily when output rises again;

(c) the strategic decision to involve the worker temporarily at least in helping the company diversify. In this situation the

worker or workers would be carried by the firm during the sales downturn and would be engaged in new product development.

Depending on the additional cost to the firm of maintaining temporarily surplus staff in (a) to (c) above, the firm may request the employees to bear some of this cost by, for example, not taking salary increments or bonuses, by not charging for overtime, or by wage reductions.

Therefore improving the productivity of labour prior to and during its actual employment can increase, other things being equal, the actual level of employment in that economy and the future potential for output and employment. This type of dynamic analysis cannot similarly be made with any of the other inputs. These have static cost/productivity balances which can only be altered by changing their labour-management usages.

Objective

This work sets itself a very limited objective. It aims to reflect on the education and training systems of five low unemployment systems to see what can be learned from their particular structures and what might be borrowed by those of us who feel we need to improve the quality of our human resources. If we wished scientifically to verify that improved human resources enhances an economy's employment efficiency by doing a cross country analysis, we would indeed be brave, at least given today's data and information base. First, we would have to define exactly how to measure human resources and identify comparative quality levels by country. Then we would need to compare human resources differences across countries with changes in levels of output and unemployment. Finally, we would have to allow for the influence of other factors. Scientifically we cannot hope to do this on a cross country basis if we are to even consider for the moment the bleak prospect of looking at the Swiss education and training system. There is no one Swiss education system. Rather, as we will see, there is a different educational system in each particular canton.

A review, however limited, of the education and training structures in low unemployment countries will have a number of advantages. First, at the very simplest it will help place our own

institutions in greater relief. Second, relatively low unemployment is no accident. It happens in some countries for at least certain periods of time. If we do no other then than accept that a country's human resources system must play some role in the efficiency of its economy then we have reason to consider it. We do not have to go as far as Levine and Kawanda who stated that if a country is unable to develop its human resources, it cannot develop anything else.[6] Neither do we have to accept the concept of employment efficiency and the argument that a weak education and training sector may in some way partly cause one's unemployment. One need only accept that our education and training system could be improved and this improvement could help our development by encouraging us to look closely at the systems within these five economies. This is the minimum reason then why anyone should be encouraged to read this study. Barclay states that it is not possible for any one country to generate all the ideas it needs and many countries have been undermined precisely because they have been too insular or arrogant to absorb foreign ideas.[7]

Small countries like Ireland tend to be excessively in awe of their previous coloniser. In our search for new ideas and better structures we have concentrated too much on things English. This is understandable in the early stages of development. It is to be expected on the basis of language, culture and strong trading links, it is less appropriate in our present circumstances. With our further integration into Europe and the increased pace of international competition, our horizons must not be limited by the short term inconvenience of learning how less well known societies do their business. If the Japanese, who were poorer economically than us at the end of the last century, had the courage to send their people to the far side of the globe to bring back new ideas and help them develop, then surely we should be able to do something similar. With today's aeroplane, the OECD and other international agencies and the available international expertise, the more successful foreign systems should be quickly tapped for the relevant lessons. One can anticipate two queries.

First, are we not an active member of both the EC and the OECD which provide us with all the information we need? On the EC it should be noted that all of the major low unemployment countries are still outside its frontiers. On the OECD we make limited use of its structures to gain access to the experience of other countries'

systems. We do of course use its mechanisms to review our educational and other policies. However, even the fruits of these somewhat limited exercises are poorly absorbed by our structures, although this is very slowly improving as was evidenced by the relatively minor debate on the 1991 OECD review of our education system. Much of the work done in the OECD by our hardworking civil servants is mainly limited to batting for Ireland to ensure that OECD publications do not understate our efforts. There is nothing wrong with this except we should now encourage a greater use by us of the OECD as a telescope to access the experience of other countries.

Second, what do we do when we identify the successful components of another country's system? How can we grow cacti in Connemara? Of course we cannot directly transplant the segments of another country's system into our own. The Japanese did not directly transplant the relevant components of the French, German or English systems into Japan - but they did develop their own system on the basis partly of their experience of more efficient systems. This area is covered in greater detail in the earlier part of chapter six. Many Irish policy makers have tended to take their lessons from old neighbours, academics and experience.[8] On the unemployment area at least the first source must now be considerably reviewed. The usefulness of academics, particularly the more helpful discipline of economics, is now in more disarray than ever sending, as it does, conflicting and less than convincing signals.[9] It would seem then that the range of experience and its variety must be increased. This study is a small effort in this direction.

LAYOUT

Each country begins with a note on its economy including its unemployment record and an outline of some of the general reasons for its success in this area. Then follows a background note on the education and training system. We then deal with formal education which covers both compulsory and post-compulsory including the upper-secondary and tertiary sectors. The apprenticeship system in Austria, Switzerland and Norway is outlined and the story of its disappearance in Japan is covered along with a comment on its low level in Sweden.

Adult education is looked at in Norway and Sweden where their contrasting systems tell us much about this area of education. In Switzerland it does not have a precisely defined legal status nor a formal agency looking after its interests. In addition, the more interesting Swiss elements were elsewhere for example its dual system, etc. This latter point also explains the absence of this sector from Austria and Japan. Next follows manpower training which is examined in Sweden, Norway and Japan and which together provide a richly contrasting group of systems. The in-firm training system is briefly covered in Sweden and in greater detail in Japan. The Japanese provide a very interesting contrast to western systems and explains, at least partly, the increase in western business delegations visiting Japan. Finally, the last chapter reflects upon our material and considers some of the lessons that can be learned from the different systems.

The main information source has been the OECD. The Council of Europe, the ILO, UNESCO and CEDEFOP have also been helpful along with various research and government bodies in the different countries. Finally, certain key specialists in the five countries along with a small number of American, French and British scholars have provided both advice and material. Without this international expertise this report would not have been written.[10] The data and information aims to give a reasonably brief overview of the different systems. Greater emphasis is given to trying to paint an overview of each system rather than simply providing the most recently released statistics. For those who will wish to follow the continued success or otherwise of these systems one could access firstly the future flow of OECD material along with that provided by the relevant country based institutions.

NOTES TO CHAPTER 1

1. See Therborn (1986) which focuses on the period between 1973 and 1984. The 1993 OECD data shows that Luxembourg and Iceland have also very low projections - see OECD (1992,c)p.39-40. The original Therborn work did not deal with Luxembourg and Iceland probably because of their size. Incidentally Ireland with its high employment profile was not covered either.
2. See A Nation At Risk (National Commission on Excellence, 1983) quoted in OECD (1991,b)p.35.
3. See Ford (1987) p.267.
4. Of course commentators will argue that the ceteris paribus assumption is hard to swallow. After all, other things such as the level and quality of capital, the rate of inflation and so on can vary significantly. This is fully accepted and we use the ceteris paribus assumption to extract the relationship between human resources and employment. However, we point out that the significance of human resources as an important factor in the level of unemployment and unemployment probably needs to be considered more than it is at present. The importance of human resources per se has been reasonably well documented in concept of human capital. This concept essentially treats expenditure on education and training as an investment which produces both financial and nonfinancial returns. However, improving one's human resources so as to increase output and employment and thereby reduce unemployment has not been given much, if any, space in the literature.
5. Some aspects of the employment efficiency of organisational structures are referred to in Kerins, (1988)p.63-85.
6. See Levine & Kawanda (1980)p.14.
7. See Barclay (1986)p.14.
8. I too was a very minor part of this process in the late seventies in assisting at preparing legislation on supplementary welfare allowances which was, to some extent at least, based on the English equivalent.
9. See among a wide range of material here Kerins (1987)p.273-295 and (1991)p.248-264.
10. To facilitate the reader the textual references are put in notes at the end of each chapter. If there is more than one publication in a year by a person or organisation each is given a different alphabetical notation - e.g. OECD (1992,b) means the second OECD reference in 1992. Table references are at the bottom of each table - e.g. OECD (1992,b,27). This means p.27 of the second OECD reference in 1992. In some cases as in OCED (1985) the first reference in that year has no alphabetical notation, therefore, OECD (1985,b) becomes the third OECD reference in 1985.

2 NORWAY

Background and education

Based on the data in Table 2.1 below, Norway, located in the northernmost part of Europe, has the fifth smallest population and labour force in the OECD, all living and working within a relatively large land mass thus giving it a low population density. It is a rich economy with a high GDP per capita which compares well not only with other OECD countries today but also with its position in the early part of this century. At that time it produced only a little over half of the UK product per capita figure and was exceeded by a number of countries it has since eclipsed including the UK, Belgium, Netherlands, France and Ireland[1]. As with other of the more developed OECD countries it has a large proportion of the labour force in the services sector and a small proportion in agriculture.

Norway has a comparatively large public sector with current government receipts representing over half of GDP and in this respect comes behind Denmark and Sweden. Being a small country Norway is relatively reliant on trade with exports and imports amounting to over 50 per cent of GDP. However, this figure, large as it may appear, does not come near the openness of the Belgian or Irish economies whose total of exports and imports surpass their GDPs.

Table 2.1: Norway - basic data

Population 4.23m	**Area 324000km^2**	**Density**	**13 per km^2**
Total civilian		*Sectors A	6.6
employment 2.01m		I	25.3
		S	68.1
GDP p.c. $21,341		**Exports + Imports	56.3
		**Government Current Receipts	54.9

Source: OECD (1992,a)

* % TCE ** % GDP

Employment

As Table 2.1 above shows, total civilian employment is approximately half the population in comparison with such high unemployment OECD countries as Spain and Ireland where it is less than a third. Norwegian unemployment which averaged 1.6 per cent p.a. from 1960 to 1986 was the lowest in any OECD country except Switzerland.[2] The recent data indicates that although unemployment has increased it is still low by international standards and the 1993 projection is for a continuation of the downward trend of 1992. In addition Norwegian long-term unemployment according to Fest is the lowest in the OECD.[3]

The above achievement on unemployment occurs despite a strong growth in both the labour force and the labour force participation rate which although below the OECD average in the 1960s has become one of the highest in the world. Why is Norwegian unemployment so low? Before we look at the Norwegian education and training system we will briefly outline the broad reasons for its low unemployment.

First, relatively low unemployment in Norway can be partly explained by the high priority traditionally attached by successive governments to full employment. Norway's concept of manpower policy had its origin in the experience of widespread unemployment in the 1930s which led to its preoccupation with achieving full employment. The most complete early statement of Norway's concept of manpower policy is in the preamble to the 1947 Employment Act which suggests a mandate to introduce measures to reduce unemployment. This emphasis was reinforced by the 1954 constitutional amendment which states that it is the duty of the state to create conditions which ensure that everyone can 'earn a living by his labour'. The cornerstone of Norwegian manpower policy is therefore the elimination of unemployment.[4] In addition, the Secretary General of the Ministry for Finance has stated that full employment is an overriding goal of the major political parties in Norway.[5] In another forum the Minister of Church and Education stated bluntly that the maintenance of full employment was the principal objective of Norwegian policy.[6] The recent increase in unemployment in Norway has led to significant societal and political pressures which should bring the figures back down. This is indicated by the most recent OECD projections for

1993.

Second, Norway like her Swedish neighbour, has had a relatively active labour market policy for those who are unemployed or in danger of unemployment and this we will look at below in the training area. In addition there was selective intervention in the labour market which was mainly in the form of direct government subsidies to the private sector. In this latter respect it is likely that it was, at least in this area, an advantage to Norway that it was not a member of the EC as a large part of its subsidy policy would be disallowed by EC law.

Third, as with most of the other four economies Norway met the crises of the 1970s and early 1980s with an expansionary fiscal approach. However, Norway's situation was a little unusual because of the benefits of the very significant oil and gas revenues both of which were exploited mainly by the public corporation Statoil.

Finally, despite Norway's low unemployment its wages have increased at a similar rate to other OECD countries. Wage determination levels in Norway has been highly centralised and the government has traditionally tried to influence wage levels and at times has intervened in the process through legal means. It is argued that such a centralised bargaining system may make trade unions more aware of the jobs cost of excessive wage demands. In addition the government has encouraged the concentration in the Spring of all important wage settlements so as to avoid leap frogging and the parallel problem of a single union accepting wage moderation without the certainty that others will follow. Thus Norway's high level of trade unionism and its strong central bargaining has encouraged wages at central level to be very sensitive to labour market conditions.[7]

Background To Education And Training

Education and training is a very important part of Norwegian society and has, as with many other OECD countries a relatively long history. However, Norway's education and training structures have had their own specific moulding over the centuries and one of the more important factors in this respect is her terrain.

Norway's geographical conditions, including her large and sometimes inhospitable landmass, allied to the historical problems

of communications, played a part in preventing the feudal system of the rest of Europe from gaining a foothold in the country. The country was both too isolated and too poor in natural resources to permit a powerful upper class to develop in urban areas and to become an established part of Norway's socio-economic fabric. This simple fact has echoes today in Norwegian society.

First, it has helped develop a relatively egalitarian society with fewer class divisions than in many other OECD countries. In addition she is a homogeneous society with no great significant or cultural minority. The Sami or Lapps are so remote from the centre and so small in relation to the population that they have not been a factor in defining the Norwegian sense of identity. This homogeneity has helped to simplify social policy development and has provided a focus on equality towards which great efforts have been made.

Because of her geography and widespread population Norway has adopted a very vigorous regional approach to education. Her Minister for Cultural and Scientific Affairs has stated that decentralization is not a luxury to be afforded in good times and discarded in hard times.[8] This approach is visible right through her educational structures but particularly in her regional college system which has a well developed regional structure . At the more basic level of schooling it has been part of Norwegian policy that children should be able to attend school without leaving their families. One consequence of this was that more than half of elementary schools had less than one class for any particular age group and some schools had only one class.[9]

In comparison to other countries, Norway has only a small private school sector and no strong tradition of private provision. An example in this area are the folk high schools which are mainly run by private organisations and operate outside the upper secondary school system. These are residential schools for young adults mainly between 17 and 22 years and offer general courses with no set exams or curricula and their main role is to provide young adults with an opportunity for personal development.

An interesting aspect of the Norwegian approach to training and education is the very wide embrace of the educational spectrum - from basic through lower and upper secondary, through tertiary education and on into adult education which includes not only popular education and second chance education but also job related

training and, under certain conditions, in-firm training. Holmes said in his UNESCO guide to different education systems that the Norwegians accept the principle of lifelong education.[10] However, he could have been somewhat more emphatic about this point by referring to the unusually wide remit of Norwegian adult education, something we consider in more detail later.

A final point worth noting here is that Norway, like its Swedish neighbour, is a corporatist society where policies have to be discussed with a range of interest groups. Here government ministries exercise power carefully and hold the ring between the various pressure groups. Thus the development of training or educational policies has to take into account factors not considered in non or less corporatist societies. We will now look briefly at the evolution and organization of the education system.

EVOLUTION AND ORGANIZATION

Education has been provided by the religious since about the middle of the 12th century. In those days education was a voluntary matter and restricted to certain pupils. The provision of compulsory education has existed in Norway since the mid-18th century. In Norway, as in other Protestant countries, it was believed early on that ordinary people should acquire basic literacy for religious purposes. This was made compulsory by an act in 1739 but it was only partially implemented. An 1860 Act established the policy of permanent primary schools rather than travelling schools. However, it was over thirty years before this was fully implemented. Compulsory education of seven years duration came to exist in Norway from 1889.

The goal of educational policy in this century has been to build up a comprehensive school system which ensures that all pupils have the same general education. Comprehensive education in Norway has been compulsory since 1920. There were a number of significant developments in the education sector, especially during the period after the second World War, to which we will refer below under compulsory and upper secondary education. As regards the comparative position of Norway the data shows that the number of secondary school leavers was nine per cent of the relevant age group in 1951. This was considerably higher than Austria (3.5 per cent), Sweden (5.4 per cent) and Switzerland (3.2

per cent) along with Germany, Denmark, the UK and Holland. By 1965, 9.5 per cent of pupils were staying on in school for at least one year above the compulsory school age. This also compares well with the other countries. By 1982 the average adult in Norway had attended 13 years of school and almost 80 per cent of 13-18 year olds attended school which was comparable with or better than Sweden, Belgium, France, Denmark and Holland.[11]

In Norway today the Storting or parliament has the legislative power on education issues. The government had, until January 1990, operated the educational system through two ministries:

- Ministry of Church and Education which covered primary, secondary and adult education.
- Ministry of Cultural and Scientific affairs which covered higher education.

The present Ministry of Education and Research covers all levels of education including primary, secondary, higher and adult education.

Education System

In this section we will look at the upper secondary education, tertiary and adult education. First, however we will review briefly compulsory education.

COMPULSORY EDUCATION

In 1954 the National Council for Innovation in Education (NCIE) was established to do research and experimental work on educational development. Although the education ministry exercised the ultimate control, the NCIE was given the authority to manage all experimental school projects. During the 1950s the NCIE concentrated its work on the development of the compulsory school culminating in its plan in 1960. After a heated debate in the parliament the plan was withdrawn and in 1963 a Royal Commission was set up whose report formed the basis of the ministry's formal proposal in 1967. Following two years of consideration the basic law for compulsory schooling was passed in

June 1969. A Norwegian child under this law has traditionally started school at the age of seven and had nine years of compulsory schooling divided as follows:

- Primary six years from age seven to 13
- Lower Secondary three years from age 13 to 16

A Norwegian child normally starts compulsory school at seven years. Discussions have been going on for some time in Norway on the advisability of starting school at six years and how the school teaching system would be adapted for that purpose. According to the ICE, extensive experiments were started in the fall of 1986 and, by 1987. forty five municipalities were involved.[12]

The Government proposed in a White Paper in 1989 that schooling be introduced gradually at six years of age thus extending compulsory school to 10 years. However, the April 1989 White Paper was withdrawn by the new government which took office in autumn 1989. This may only mean that this proposal is slowed down in its implementation as distinct from being turned back. However, a firm decision is expected in the next year or so.

Because of the widely spread population in Norway and the strong support for such scattered communities, there are a large number of small schools in remote areas and about one third of the schools have more than one age group in each class. Some schools have as few as six pupils or less with the different age groups together in the same classroom. In addition almost one third of the schools are in combination buildings providing primary and lower secondary schooling under the same roof.[13] In 1987-88 the average number of primary pupils per class was 18 and 23 in lower secondary approximately. As with other OECD countries the number of pupils in compulsory education has decreased in the last decade due to demographic factors.

Compulsory education is completely comprehensive with each class being kept together as a mixed unit at least from the first to the sixth grade and in many cases to the ninth grade. During the first seven years all pupils take the same subjects. In the eight and ninth years options are available in addition to the compulsory subjects. There is no streaming and all compulsory subjects are taught to mixed ability classes. The main approach is individual attention

within these mixed ability classes and schools must provide teaching suitable to children's ability. There is no repeating of grades.

Each school is the responsibility of the local government unit whose Municipal Education Committee is appointed by its council. Its work includes appointing teachers, budgeting, and so on. To ensure the proper development of the schools a Director of Schools is appointed by the central authorities in each county. He represents the government and acts as the link between the education ministry and the individual municipalities. Since the municipalities are becoming more independent in both financial and educational matters due to a recently introduced funding system, a more significant aspect of the school director's role is to assist the schools in each county with school innovation and in-service training.[14]

Approximately 95 per cent of 16 year olds leaving compulsory education go into upper secondary education. In principle everyone has the right to three years of education at this level although they may leave with a certificate after one or two years.[15]

Upper Secondary Education

Norwegian upper secondary education is regulated by a June 1974 Act which was implemented from January 1976. This Act coordinates all upper secondary education covering both general and vocational schooling. According to Bjordal 80 per cent of its pupils are between 16 and 20 years of age.[16]

Prior to this, upper secondary education was provided by a variety of types of school. These schools were independent of each other and each was governed by particular laws and had its own particular tradition. For example, there were grammar schools with various branches, vocational schools for various industries, crafts and for commercial subjects, along with maritime, fishing, agriculture and domestic science schools. The common school law of 1935 and the vocational education school law of 1940 formed the legal basis of these schools. For a number of years after the 1974 law some of the schools in certain localities retained their old names. As early as three years after the change, most of the schools were renamed upper secondary schools and the last pupils to be accepted by high schools according to the old system were enrolled

in 1978.

According to the 1974 Act the three functions of the upper secondary school are to:-

- Prepare for work and life in the community.
- Form the basis for further education.
- Assist pupils' personal development.

For this purpose, a major objective of this legislation is to unify vocational and general schooling into one comprehensive system and give equal importance to both the practical and theoretical components. The process of establishing and consolidating on the comprehensive role of the upper secondary school has developed considerably over the years since the 1976 change. However, the process is not yet complete. As the OECD state the Norwegian upper secondary school still has to find its way from the more traditional and selective approach towards the creation of a meaningful comprehensive school.[17] This is also echoed in recent ICE UNESCO reports. Which state that the trend towards the comprehensive system is likely to continue.[18]

Within this system, both general and vocational studies exist side by side in the same school and can even be combined within the same course. There are 10 different subject areas as shown in Table 2.2 below.

Table 2.2: Upper secondary subject areas

Subject Areas	Pupils	Male	Female
General	41	38	44
Technical & industrial	25	41	8
Commercial & clerical	20	14	25
Social services & health	5	0	9
Home economics	4	2	7
Domestic handicrafts & aesthetics	3	1	4
Physical education	1	2	1
Maritime	0	1	0
Fishing trade	0	1	0
Agriculture & rural*	-	-	-

Source: data based on National Council for Upper Secondary Education (1989,a p.4)

Notes:
(i) Data for * is not included because this was not integrated into the upper secondary school system until 1990.
(ii) An '0' means the figure is below 0.5 - the data is rounded up or down to the nearest one per cent.
(iii) The table excludes the apprenticeship training school.

The above table indicates that the largest proportion of upper secondary students take general subjects followed by technical/industrial and commercial/clerical topics. A relatively large proportion of females opt for the general, commercial and clerical area while the males dominate the technical and industrial subjects.

All the above 10 areas of study have the same basic structure as follows:

Foundation course - This can last for one or two years depending on the subject. The two year foundation course has a common core of general subjects which takes up nearly half of the timetable regardless of the study area. The rest is devoted elsewhere depending on the subject chosen.

Advanced course - This can last for one or two years depending on the subject area chosen.

We briefly outline the main subject areas available in Appendix 1.[19]

ADMINISTRATION

Apart from the Ministry for Education and the local authorities, which to a large extent administer the upper secondary education, an important body is the National Council for Upper Secondary. This operates as an advisory body attached to the Ministry. Its board, appointed by government, includes representatives from the various interest groups, including staff, pupils, trade unions and other educational interests. It also includes representatives from both the employers' association and, interestingly, the employment authorities. It was established with the new regime in 1976 and replaced five councils which had been concerned with the former types of upper secondary schools.

With approximately 90 staff, the National Council has four divisions: educational development, exams, information and administration. Its main function is to take the initiative in providing the Ministry with proposals on the education and training of young people who have finished the compulsory cycle. It also advises regional and local educational bodies. The type of work it does includes education research and information, curriculum development, in-service teacher training, textbook approval, exam administration and so on. Part of its work in the research and development area is to experiment with new models by testing different subjects and course structures and also to run surveys in different areas as a basis for developing the system.[20] In any integrated system of upper secondary school the differentiation of its curriculum is important. This differentiation and the development of the curriculum would have to be done by some other organisation should the National Council not have been set up.

OVERVIEW

There has been a 25 per cent increase in the number of pupils in upper secondary school over the period from 1978 to 1990. What was considered to have been a peak of 180,000 pupils in the 1985-86 has been surpassed by an extra 40,000 pupils since then . One of the main reasons for this large jump in numbers has been because the government has had to provide extra places as a measure against the recent Norwegian increase in unemployment. If we look at the data on school leavers from the general and commercial branches of secondary school during the last decade, we see a change in balance between these two categories. At the start of the decade school leavers from the general branch formed 93 per cent of the total and near the end of the decade its share fell to 74 per cent. All of the mature school leavers came from the commercial branch and the general area experienced a five per cent decline in numbers.[21] Thus we may deduce that school pupils became more vocational in their choice of school system. This increased vocationalism in the 1980's, was part perhaps of a broader trend as we see in the section below on tertiary education and may not be fully explainable by the more difficult labour market situation at the end of the decade.

In addition to the strong linkage between school and work,

indicated by the wide range of upper secondary vocational subjects available, the Norwegian authorities have been keen on developing other ways of improving this linkage. This has been evidenced in the late 1980s by the transformation of upper secondary schools into regional centres of competence where they can provide different kinds of further education and training. One of the tasks of the 1989 Royal Commission on upper secondary education has been to consider ways of developing this school-work relationship.

No system is perfect and, as we saw earlier, the Norwegians have still to achieve a fully comprehensive upper secondary system. In addition there has been a problem of recruiting able teachers given salary competition from elsewhere. It is not always that easy either to choose a non traditional combination of subjects and vocational course students have complained about the strong emphasis on general subjects. In reply the authorities argue that more general training is still desirable. Employers have complained too about the inadequate co-operation between school and work. It is interesting that employers, pupils and third level bodies have argued for a 'back to basics' approach - a not unfamiliar comment in many other OECD countries. Despite these difficulties however the OECD in its review of Norwegian education state that the 'comprehensive system for upper secondary schools is a noticeable Norwegian achievement'.[22]

COMMENTARY

Norwegian schooling at primary and secondary level is acknowledged internationally to be of a high quality. The 1969 and 1974 Acts left Norway in the 1980s, according to Rust, with a monumental victory over the traditional dualistic school structure[23]. The reforms focussed on replacing a two track school system with a unified and comprehensive school system. Rust argues that Norway has been successful at introducing school reforms for a number of reasons - two of which are mentioned below.

First, because they have a high degree of awareness of international educational developments and a strong capacity to adapt the useful ones to their own needs. In addition, according to the OECD, Norway has had an exceptionally high percentage of students studying abroad. As far back as the 1960 to 1979 period 51 per cent of business administration graduates and 32 per cent of the

graduate engineers were educated abroad and this trend has continued to today. Rust's point on Norway's use of foreign experience is also confirmed by evidence in other areas. For example Woien argues that although Norway had no recent experience to draw on in the long-term unemployment area, the national authorities in its deliberations relied heavily on the lessons learned in other countries.[24] Norway has also been very effective at developing its own ideas internally where there are no suitable external examples to inform new policy development.

Second, because reformers in Norway have had access to those who make the decisions. According to Rust a remarkable openness exists in Norway which provides almost anyone, who takes the time and effort, access to the decision makers. This is partly because the population is so small and also because of its corporatist structures.

Apprenticeship System

According to the OECD the apprenticeship system in Norway had been undergoing a decline up to the 1970s.[25] As we can see in the table below the number of apprentices in Norway as a percentage of total civilian employment at 0.7 per cent placed Norway among the group of countries with the lowest levels of apprenticeship. In this group it is interesting that we also find her other Nordic neighbours, Sweden and Finland with Denmark lying at the bottom of the medium group.

Table 2.3: The relative level of apprenticeship in selected OECD countries in 1974

Country	Apprentices as a % of total civilian employment
Low level:	
Japan	-
Sweden	*
Spain	0.1
Finland	0.2
US	0.3
Belgium	0.5
Canada	0.7
Norway	0.7
France	0.9
Medium level:	
Denmark	1.4
Ireland	1.4
Netherlands	1.5
UK	2.1
Australia	2.3
New Zealand	2.7
Italy	3.6
High Level:	
Switzerland	4.9
Germany	5.2
Austria	5.4

Source: Based on OECD (1979,25)
Note: Japan is classified as one of those countries where apprenticeship is almost nonexistent.
* less than 0.1.

POST -COMPULSORY MODELS

To help set Norway's apprenticeship system of the 1970s and early 1980s within some type of interpretative framework we provide below an overview of the post-compulsory educational phase on which to base our comments. The OECD has pointed out however that the structure of education and training in this phase is normally the most complex stage in any system. In some countries this stage has been referred to as a jungle or maze. For this reason, detailed comparative studies of this phase are very difficult to make. In order then to simplify the task of placing Norway's post-compulsory phase in perspective we refer to three simplified models of educational provision in this post-compulsory phase.[26]

The *schooling model* is characterised by a tendency to integrate most, if not all, forms of post-compulsory schooling within the formal education system. This provides full-time schooling for the majority of this age group. This approach was adopted by those OECD countries which pioneered the development of mass secondary education such as Canada and the US. In these countries most secondary school pupils enrol on a full-time basis. The model today however finds its most complete example in Japan where nearly all of the relevant age group attend upper secondary school.

After World War 2 this full-time schooling model also developed in Western Europe where the formal schooling system now dominates educational provision. However, important differences exist between this and the non-European variants. For example, both Sweden and Belgium are nearest to the ideal school model because, along with a high participation rate, their school systems have almost a monopoly in the provision of education and training at the post-compulsory levels. However, the Swedish in particular and the European variant in general has a relatively greater level of vocational and technical education whereas the Japanese and US components have a larger element of general education.

The *dual model* contains a strong apprenticeship sector and is most clearly identified with Austria, Germany and Switzerland. These are the only OECD countries where the ratio of 17 year olds in apprenticeship exceeds the proportion in full-time schooling. In addition these countries have compulsory part-time education up to 18 years and consequently overall participation rates are among

the highest in the OECD.

The *mixed model* contains a strong non-formal training segment. Here schools still provide the dominant form of provision but it is based on the idea that the school sector cannot or should not try to monopolise the post-compulsory sector. This arises from both the need to find more suitable structures to prepare the adolescent for the world of work and from the experience of the growing youth unemployment of the mid to late 1970s and early 1980s. It essentially favours the development of separate initial training schemes either outside of schools or clearly distinct from any formal educational programmes. In this model, training schemes are seen to represent an alternative to the existing network of formal education and are, therefore, to some extent, a competitive sector organised largely beyond the control of the education authorities. A major example of the mixed model is the UK, where the previous Manpower Services Commission (MSC), operating under the Department of Employment, was given the responsibility of providing training for a large proportion of those not catered for by the school and college sector. France had also shown some interest in different versions of the mixed model due partly to its experience of rising youth unemployment.

The OECD in its work on this area pondered on the possible future development of this mixed model and its ability to remain a distinct and lasting entity in view of the relatively short and less structured nature of such training. One long run scenario according to them is for this sector to become more formalised and qualification based bringing it closer to the educational sector with its formal testing, teaching and vetting procedures. Another possibility is that it continue to develop as a parallel or alternative sector. In this context it is notable that FAS, is now getting approximately 40 per cent of its funding from the European Social Fund which thereby provides a significant resource for its continued operation.[27] FAS, like the old MSC, is under a separate ministry, the Department of Enterprise and Employment providing its work with a powerful counterpull to the natural incorporative tendency of the education sector. As an aside, we could mention that the OECD states that the mixed model bears strong similarities to the dual model with which it shares some common problems. However, these similarities mainly relate to the non-school nature of both models:

dual	Full-time schooling or alternatively part-time schooling along with on-the-job training.
mixed	Full-time schooling or alternatively non-school provision of training.

It is more useful, however, to treat these two models as completely different in particular because of the very separate origins and circumstances from which they arose and within which they have evolved.

In relation to Norway we can say that her post-compulsory phase in the late 1970s and the early 1980s can be identified as belonging roughly to the Western European variant of the schooling model. First, she had a relatively low apprenticeship content which was counterbalanced by a relatively high school participation rate. Second, she had a relatively well balanced mix within the upper secondary between general at 44 per cent and vocational and technical at 56 per cent.[28]

Since the early 1980s, however Norway's apprenticeship system has undergone some significant developments. According to Dolven some of the impetus for these changes came partly from their experience with the Rogaland industrial co-operative which was set up and which provided some support for the apprenticeship system and more prominently from studies published in the late 1970s and early 1980s on the educational system of other countries including West Germany.[29] Since 1980 Norway has made strong efforts to model its post-secondary education and in particular its apprenticeship system on the German-Swiss model.

APPRENTICESHIP CHANGES

The key change in Norway's apprenticeship system was the May 1980 Apprenticeship Training in Working Life Act which came into effect on 1 January 1981 and which was revised both in March 1984 and in June 1985. The Act and related regulations deal, among other things, with the following topics.

(i) New trades are introduced under the Act by the government

on the basis of a joint proposal from the social partners and with the support of the Council for Apprenticeship Training and Working Life. If there are no wage agreement parties in an area the Apprenticeship Council can on its own propose a new trade. The council was set up to supervise the implementation of the Act and as an advisory body to the Ministry for Education and Research which is responsible for policy developments in the area and for creating the rules and regulations. The Ministry has also to approve all training programmes and exam regulations.

The council itself contains 13 members with four each from the employers' and employees' side, two from the Ministry and one each representing local authorities, labour market authorities and the apprentices themselves. The council appoints appeals boards for each trade on the basis of recommendations from a trades training council (see below) and this decides on candidates' appeals on exam results.

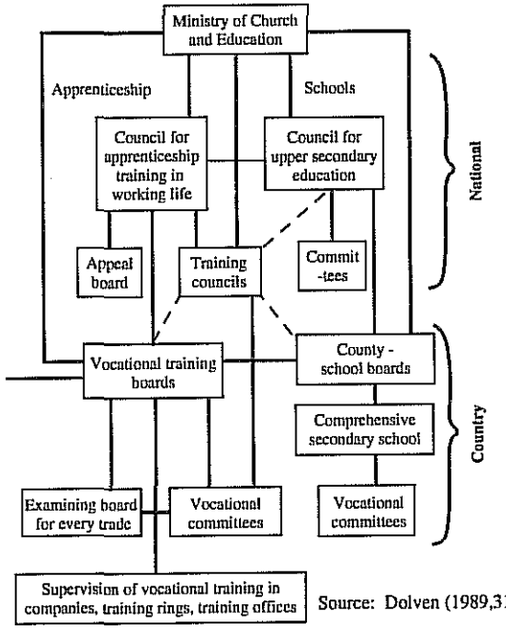
(ii) Since the council cannot have complete competence in every trade, a training council is set up for each trade or group of trades. Most of the larger trades cooperate with related trades so as to have adequate resources to set up a secretariat for their training council. In practice these councils are the highest technical authorities in any trade and advise both the central and local authorities. They draw up proposals for both the practical and theoretical elements of the apprentices training along with exam regulations. In addition they must keep up to date with developments in their trade. Each training council is appointed by the Apprenticeship Council for four years and has an equal number of representatives from employers and employees with at least one member with a good knowledge of the school system. At the end of the eighties there were about 50 training councils.[30]

(iii) The local administration of the apprenticeship system is carried out in each county by the Vocational Training Board. The board is appointed by the county council and has seven members - two each from the employers' and employees' sides and one each from the county's education committee, the apprentices and the county's employment and development board. The term of office corresponds to that

of the county council. The boards work is carried out by its secretariat.

These boards liaise with the local authorities and, since the apprenticeship system is part of the upper secondary school system, this also requires extensive cooperation between the boards and the upper secondary school system in each county. In addition the boards set up advisory vocational committees for each trade or trade area. The boards distribute subsidies to firms engaging apprentices. In practice what this means on the ground is that they ensure that firms carry out their duties under the Act by, for example, ensuring that contracts are signed and the correct training programme is carried out. These boards can also help adults, with suitable experience in a trade, take their apprenticeship exam. In this respect those over 20 years can also become apprentices. Such adults must have a good experience of the trade and be in it at least 25 per cent longer than the normal apprenticeship period and this experience must have been got after the person's twentieth birthday and must be approved by the Vocational Training Board. An organizational chart of the structure of the apprenticeship system is shown in figure 2.

Diagram 2.0: organisations concerned with the apprenticeship system



Source: Dolven (1989,31)

(iv) In order to become a training enterprise a firm has to be approved by the local Vocational Training Board and if the firm does not comply with the rules the board can take this right away. In addition, a firm, according to section four of the Act, must employ a trained specialist (technical supervisor) to be responsible for apprenticeship training. So that this training operates satisfactorily section eight of the Act states that the employee representative and the technical supervisor must ensure that in each training enterprise there are adequate training facilities, the training programmes are followed, the apprentices participate in the compulsory school and the proper contracts are drawn up.

A wide variety of organizations can take on apprentices including a private or public firm, a cooperative or a training office or ring. It is worth saying a few words on the latter two.

Training Ring: This is an agreement between two or more enterprises to share jointly the responsibility for training apprentices. In this case the agreement is signed between the apprentice and the individual enterprise which takes on the main responsibility for the apprentice. The Rogaland project referred to earlier had an impact on the early development of training rings.

Dolven provides an example of the Follo carpentry ring where most of the carpentry and woodwork firms in the Follo area are members. The ring was a cooperative venture between the different firms and it made its own rules according to a standard model. It elected an executive committee which appointed a staff member from the local upper secondary school. Let us assume a ring decides to take on an apprentice called Arne. According to the Act that apprentice becomes the prime responsibility of firm A and may stay there for eight months. After that firm B may then take on Arne for six months and swop him with Elizabeth who had been taken on at B at the same time. A may produce timber products using very up to date technology whereas B may produce different timber products selling to separate markets and using more labour based production methods. Both apprentices would also have a period of schooling. At present there are about 100 rings in Norway.[31]

Training Office: This is a cooperative body consisting of a number of firms sharing the responsibility for apprenticeship. The

contract is signed in this case between the apprentice and the training office. The apprentice is given training in one of the member firms or in several firms for a certain proportion of the overall time.

Training rings or offices are often set up where there are several firms in the same trade and local trade organizations are often a normal starting point along with the local secondary school. Some examples indicate that it can take 12 or 18 months after the initial idea sets to when the ring is registered and during this process the county's vocational training board becomes involved.

The rings and offices carry out a number of tasks including the recruitment and registration of apprentices, their placement in member firms (generally two but normally not more than three), monitoring apprentices' progress, liaising with the school and so on. The Government provides grants for starting up and running rings, and for offices to cover some of their costs. Certain local authorities also give funds. In addition part of the training subsidies paid to training enterprises are given to the rings or offices. Firms involved in training apprentices are given a state subsidy which is fixed by the parliament in its yearly budget. Along with a monthly grant per apprentice the firm receives a grant to compensate for the training and supervision of the apprentice.

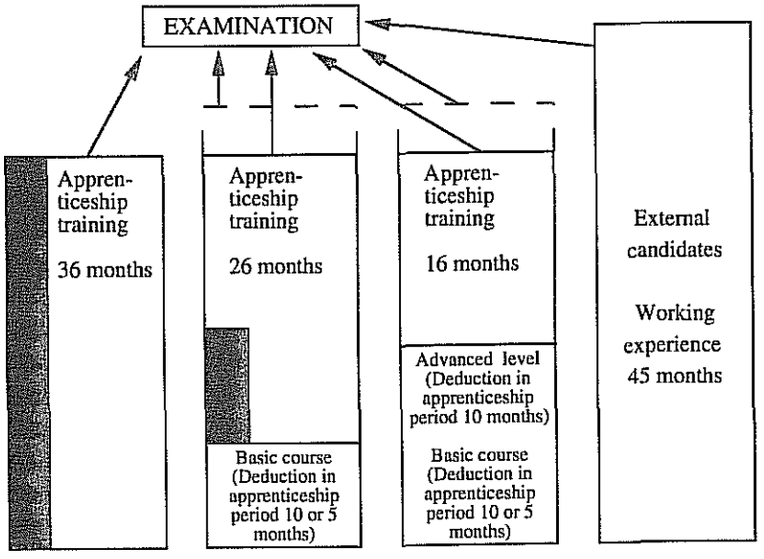
The level of education required before taking up an apprenticeship varies in some trades from a minimum of having completed lower secondary to the requirement of having a number of years of upper secondary. In the aviation trades for example an apprenticeship is rarely given without already having at least two years of upper secondary. On the other hand only half of the bakery apprentices have had any theoretical training prior to starting. Uhlen states that 20 per cent of recruits begin their apprenticeship without any previous vocational school training.[32] Such recruits and in general anyone who has not received the necessary theoretical training must attend the apprentice school.

In Norway the apprenticeship school is part of the upper secondary system and is normally located at the local upper secondary school. The usual procedure is for the apprentice to attend school one day a week. This, however, can sometimes be replaced if school is so far away that daily attendance is impossible. In this case a 10 to 12 week block course can be arranged and the apprentices have to move to where the course is provided. In some

cases also the firm may be given permission to provide the theoretical training although this is a much less common solution than in certain other countries.

Most apprenticeship programmes take three or four years to complete and this relates to that 20 per cent who begin their apprenticeship with only their lower secondary school complete. However, those who have already completed a basic or advanced course in upper secondary in their trade will get time allowances and thereby reduce the time required to do their apprenticeship. A basic course normally provides a 10 month reduction and an advanced course an extra 10 months. Diagram 2.1 will help summarise the various routes and is based on a three year apprenticeship.

Diagram 2.1: various routes to an apprenticeship exam



Source: Adapted from various sources.

The first six months are a probation period during which the firm or apprentice can cancel the agreement with 14 days notice regardless of whether an apprenticeship contract has been signed. The contract must be signed by the end of this probationary period and is then sent to the vocational training board so that the schooling element can be planned. The apprentice is paid a wage which is fixed between the relevant employer and union body and can vary considerably from trade to trade depending on market conditions. Even within a training ring wages can vary because of local bargaining though efforts have been made here to try to reduce disparities. As regards status the apprentice has all the rights and duties of an employee. However, in the case of lay offs, the last in, first out principle can not relate to an apprentice. In general he or she should be kept on as long as is educationally practical. In the case of company closure the vocational training board helps, as far as possible, to transfer the apprentice to a new firm.

Many of the larger trade areas require that the apprentice maintains and updates a training note book and it is the firm's responsibility to ensure that this is done. The note book is also increasingly used in vocational upper secondary and can give the firm an idea of the young person's education to date. Should the apprentice fail the exam the firm must keep him and provide extra training.

EVALUATION

It is very difficult to provide an accurate assessment of the Norwegian apprenticeship system particularly since we would have to compare its training efficiency with what it would have been like without its present apprenticeship structures and in particular the 1981 Act. Nonetheless, it is worth mentioning again the decline in Norwegian apprenticeship which occurred up to the 1970s and its internationally low level in the mid-1970s. By the early 1980s its post-compulsory school system was clearly identified as an example of the school model.

Since 1981 the number of apprentices has increased significantly. In 1981 there were 4,558 new contracts set up and 8,258 exams were taken. By 1987 these figures had increased by 133 per cent and 74 per cent respectively.[33] More recent data indicate that by the end of

the 1980s the numbers of apprentices had almost tripled and it is argued that by the middle of this decade one-third of all Norwegian youths will receive at least part of their education by an apprenticeship thereby leaving Norway halfway to the Swiss and German Systems.[34]

Although it is early to comment on this projection we can say that the absolute number of Norwegian apprentices had increased by over 250 per cent between 1974 and the end of the last decade. During this time the ratio of apprentices to labour force has grown from 0.7 per cent to 1.2 per cent moving Norway up, on the basis of the 1974 listing at the start of this section, to the bottom end of the medium level apprenticeship countries. Meanwhile previous medium level apprenticeship countries like Ireland and Australia have had a proportional decline in the importance of apprenticeship to, in both cases, 0.8 per cent of their labour force at the end of the 1980s. In Ireland for example the absolute number of apprentices has fallen by over 40 per cent during this period.[35]

Apart from the reasonably comprehensive nature of the Norwegian system and the central coordination and largely central funding, the training rings and offices provide an interesting example of how training resources can be pooled. In an economy which is dominated by small and medium sized firms such as Norway, where most of its companies employ less than 50 staff, these rings and offices provide ample food for thought for those OECD countries without such a pooling mechanism in their apprenticeship system.

Tertiary Education

There are about 200 institutions of higher education in Norway. Most of these institutions are quite small and only ten in all have more than a 1,000 students. In addition these ten hold half of the tertiary pupil population. Three quarters of third level bodies have less than 400 pupils with several less than 200, this being especially the case with small privately owned institutions.

The higher level sector in Norway can be divided into the university and non-university sectors (NUS). There are four universities, most of which are of recent origin, and six specialised colleges with university status. The non-university sector includes regional colleges, colleges for teacher training, engineering, social

work, health education, military training and others. The table below indicates the percentage of pupils in the various parts of this sector.

Table 2.4: Student percentages in Norway's higher education sector

	1978	1987	% increase in no's
Universities	58	42	11
Non-university sector	42	58	109
NUS composition:			
Regional	6	9	132
Teacher training	18	13	14
Engineering	9	7	24
Social work	1	1	16
Health	1	8	2333
Military	1	1	42
Other	7	19	307
Total pupils in higher education	68,615	105,014	53

Note: The data are rounded up to nearest unit explaining why the NUS composition does not total exactly to 42 per cent. The data includes part-time and full-time pupils.

Sources: OECD (1988,b,10) and Erik Hernaes (forthcoming).

As we can see from the above table there has been a sizeable growth in the numbers of students in tertiary education and this growth has been quite strong in the NUS sector which now holds well over half of the pupils' places. The largest component of the NUS sector is teacher training but this has declined in relative

terms. Regional colleges are now the second largest sector followed by health education and then the engineering college. The highest growth in absolute numbers is in health education, which is considerable, and this is followed by the regional colleges. All of the universities and regional colleges are publicly owned. However, one third of the pupil places in the rest of the NUS sector are in privately owned colleges.[36] The state covers practically all of the costs of higher education in Norway. Private colleges have a considerable proportion of their costs covered by the state. Students here have the same right to state scholarship and loans as those in publicly owned colleges - as long as their programmes are the same.

The average age of students in Norway is relatively old by international standards. The normal age of graduation from upper secondary is 19 years and most of these young people then spend some time working before entering higher education. Also around three quarters of the males are drafted for a year or so of military service. In addition the university courses in Norway, are three-and-a-half to four years for the lower degree and two extra years for the higher degree, are seen as rather long and encourage some students to interrupt their studies for a period of work, etc. The table below indicates the age of students between 1974 and 1984.

Table 2.5: Age of population in higher education in Norway

	1974 Percentages			1984 Percentages		
	20 years or less	21-24	25+	20 or less	21-24	25+
Universities	14.8	43.9	41.3	15.0	37.3	47.7
NUS	16.9	51.5	31.6	11.8	41.9	46.0

Source: Based on OECD (1988,b,41-42)

As we can see from the table 2.5, over 80 per cent of third level pupils are 21 years or over and this age group increased its prominence over the period. In 1974 the NUS had a slightly smaller proportion over 21 but by 1984 its proportion was higher. According to the OECD this trend towards a more mixed age structure in recent years has been encouraged by the government.

More recent data shows that the average age of graduates with higher degrees had increased by six per cent from 1970 to the end of the 1980's and the mean age of new university graduates is 23.[37]

Norway's late age of tertiary education provides researchers with an interesting angle to the age cycle debate in education. This relates to whether or not it is more effective to encourage people to take their formal education at one run as it were, the traditional 'front -loaded' approach, in contrast to suggesting that there is no pressing reason why education should be provided in one piece. This latter approach arises from the notion of recurrent education Here the education system is gradually transformed so that it no longer provides education in one stretch during a person's youth, but over the entire life span and in alternation with other activities in particular work. Central to this notion is the delay of a component of upper secondary or tertiary education until later so that the pupil is better motivated and informed by actual work experience.

Tuijnman's scholarly work on recurrent education in Sweden, referred to in the section on Sweden, argues on the basis of his longitudinal study of a sample of men in Malmo between 1937 and 1988, that the postponement of a component of early formal education is likely to have a negative effect on the transition rate of students to higher education.[38] He argues that the benefits of postponing any stage of one's education are rather limited. He states that a recurrent cycle of accumulation is at work whereby the quality and amount of earlier education predicts the quality and amount of subsequent education. For this reason he points out that those who postpone some part of their formal education until a more mature age are likely to be disadvantaged in the long term. If one wishes to raise the level of formal education in a society then according to Tuijnman the most effective way to do so is to provide a high level of general education early in life and then recruit people to adult education programmes as early as possible This is so since those who take these early adult courses more frequently do so later in life also.

Regardless of the above points on delayed formal education, the Norwegian example is an interesting and well established case of delayed entry into third level education. We will now consider the two elements of higher education - the universities and the NUS.

University Sector

In 1811 the University of Oslo was founded and began operating in 1833. It thus became Norway's first and, until after World War two, her only university. The University of Bergen was founded in 1946 and that of Trondheim and Tromso in 1969. This relatively late arrival of the Norwegian university system contrasts with certain other European countries some of whose earlier universities were already 500 years old. For example, Vienna University was founded in 1365 followed by Graz (1585) and Salzburg (1619). This late arrival still echoes through Norway's present university structures. As we shall see below there has been concern expressed about the role and status of Norwegian universities, and its partner - the third level regional college - has, at least until recently, been more than able to hold its own against the status and magnet of the university system.

It is interesting to reconnect the late arrival of the universities with the points mentioned earlier that both feudalism and the apprenticeship guild system were also relatively late in coming to Norway. According to Carlton the breakdown of the feudal system in mainland Europe from the thirteenth century onwards paralleled the growth of urban development. This in turn led to the appearance and development of specialised activities such as those exercised by notaries, judges, administrators and so on. At that time we find the creation of faculties of teachers and universities responsible for educating people in these specialised areas. In contrast to this, the dual system developed in certain countries to improve and develop the working class. The serfs and vagabonds who left their fiefs to become merchants, eventually bonded together to form the guilds which became the basis of the dual training system.

These two historically separate systems of education were in a way developed to educate and provide for new groups which grew out of the breakdown of the old feudal order. The middle and upper class developed the secondary, general and university system to match their career needs. The secondary schools mainly provided a liberal arts education centering on the great men of antiquity and based on pupil competition. These schools grew and developed in response to the needs of the business and professional class who were socially on the rise. The development of science

and technology mostly took place in the universities, learned societies and the like. The working class on the other hand fostered as best they could the on-the-job training of the guild system. Meanwhile the old feudal nobility and their aristocratic remnants were well able to provide educationally for their progeny through private tuition.

Therefore, it is not surprising that with the late arrival of feudalism in Norway both the apprentice system and, our present concern, the university were also late developments. The four universities in Norway are state institutions but have a considerable degree of autonomy which has been increased since the implementation of the new Law on Universities and Colleges in 1990. Up to then the university was unable to make independent decisions on curriculum and research but now it can appoint its own staff which were previously appointed by the ministry. Oslo university has 27,500 students, Bergen and Trondheim 12,500 each and Tromso about 4,000. Although these universities offer most of the traditional fields of study, there is a tendency towards specialization. Trondheim was built upon three previously independent institutions - the Norwegian Institute of Technology, the State College for Teachers and a scholarly museum. Today it is the central body for technology. In contrast Tromso in the northern part of the country does not provide the complete range of university topics but has a specialised interest in educational and scientific programmes related to problems of the northern part of the country. Along with the four universities there are six specialised colleges with university status covering agriculture, veterinary medicine, economics and business administration, architecture, music and physical education.

Non-University Sector

The main focus of policy development in the tertiary sector after World War 2 was the expansion of its university system. Prior to the 1960's the Norwegian NUS as we know it today did not exist and its possible development was not even seriously discussed. The only safe route to university admission in those days was from academic secondary school. Pupils who wished to change from vocational or technical subjects to academic or higher professional fields were required to return to the academic stream for a more

theoretical training. Generally the choice of vocational or technical subjects was considered a 'blind alley' for anyone wishing to keep the university option open[40]. At that time there was also strong support for greater geographical and institutional decentralization especially in those areas which had not easy access to a university. However, probably the most important impetus for change was the need to establish a more vocational based third level sector which would prepare young people for the developing needs of the modern economy. For example, the growing demand for vocationally trained higher level manpower in the industrial and commercial field was not being adequately provided for by the universities. A new third level sector was needed.

In 1965 a Royal Commission on Higher Education was set up to recommend changes. Out of this process arose the creation of 12 regions of education each of which was planned to have a community-oriented college. In 1969 the first three regional colleges were set up followed by two more in 1971. In 1974 the government proposed that these colleges form a general framework for the NUS. Thus a regional college would not necessarily be one single institutional unit but would incorporate a number of institutions located in different places including the specific centre called the regional college. However the debate in parliament concluded with a different arrangement whereby the regional college became just one of several kinds of NUS institutions under a common regional steering board.

In the second half of the 1970's the already existing colleges for teacher training, social work and engineering were reclassified as higher education institutes thereby expanding the NUS. Between 1981 and 1982 several health education, maritime education and other institutions were similarly upgraded. Thus between 1969 and 1982 the core of today's NUS was formed so that today it provides almost two thirds the number of third level places.

So after the interesting debates and developments of the 1960's, 1970's and early 1980's the higher education sector has settled down with the NUS absorbed and structured within its ambit. According to Eide, public debate in the area is now much more muted than in the previous decade and has focussed more on the content of teaching, the curriculum and the situation of students.[41] It has also been concerned with the proliferation of these institutions leaving us, as we saw at the start of this section, with three quarters of third

level bodies enrolling less than 400 pupils. In 1984 a conservative government White Paper proposed a policy of institutional consolidation. It argued that new public institutions should not be established and some of the existing NUS institutions should be encouraged to merge. A 1986 labour government White Paper also took this general approach. However the actual debate in Parliament on both White Papers showed some hesitancy towards a full endorsement of this merger principle due to regional opposition across party lines.

In response to a request from the Norwegian government the OECD performed an assessment of their education system in 1987. This was published in 1990. Among its various comments on the tertiary education sector the OECD also raised the question of the proliferation of very small higher education institutions throughout Norway and referred to the need to create a more integrated system. Following the OECD assessment visit to Norway a commission was set up to look at this sector and one of its terms of reference was to look at the organization structures including patterns of institutional cooperation.

The commission was given one year to report and among its recommendations were the suggestion of the 'Norway-network' connecting large and small institutions in a communication and cooperation network. The purpose of the network is, among other things, to create a framework for:

- greater specialization and consolidation.
- better cooperation between institutions including mergers of small and related bodies.
- increased inter-institutional mobility.

An interesting side-effect of the report is that it has set off a variety of cooperation and negotiation arrangements between various institutions of higher education. These range from merging of certain bodies to more practical cooperation such as resource sharing and improved inter-department contacts. The 1991 White Paper on Higher Education continues to encourage the conditions for institutional cooperation.

ENTRY

To enter third level education the normal requirement is completion of upper secondary. About 40 per cent or so of students formally qualify for entry but only about 25 per cent actually enter.[42] In 1970 only 20 per cent qualified to enter the tertiary sector. From the very start in 1969 regional colleges have allowed application from people who, although not having the upper secondary exam, could provide evidence of work experience. Although up to 20 per cent of pupils were admitted on this basis, increased competition has strongly reduced this percentage in recent times. In regard to the expansion of places in both the NUS and the university sector the number of full-time pupils is expected to be around 105,000 by 1996. This is equivalent to a 23 per cent increase since 1988.[43]

The OECD has remarked that although Norway stands well in the expansion of access to higher education it in no sense leads its European counterparts. In addition it is interesting that all of the student increase over the decade to 1984 was due to recruiting more females. In this respect Norway's recruitment rates are not high when compared to other similar countries. In addition the authorities in the mid 1980's had been concerned with a weakened demand for some third level courses. In part, however, this weakened demand according to the OECD had been due to the fact that young people have been able to get reasonable employment without recourse to tertiary education. In contrast to this relative lack of enthusiasm in Norway for third level education young people in Japan, Sweden and Austria and their potential employers regard tertiary education as an indication of achievement and quality and the competition for places is quite intense. This weakened demand has, as we will see, since been replaced by strong growth in demand for certain parts of the third level sector.

COURSES

The NUS provides more vocationally oriented courses than the universities, although they provide subjects also taught at university. These courses are normally recognised by university as being equivalent to part of a degree course, for which NUS pupils get credit.

The NUS programmes are mainly two to three year vocational courses with an average of two years. Longer courses are also available but most of these deal with particular professions such as school teachers, social work, health professions, librarianships, journalism, engineering, etc. For many regional college vocational courses there are national curriculum guidelines or plans but these operate in such a way that each college is free to decide its own particular course. In effect the main difference between the NUS and university courses is that the latter have longer courses and the former are more vocationally oriented and usually geared to certain type of labour market activities or to particular vocations or professions. In addition the NUS originally held no research function in contrast to the university which traditionally gave a fairly high level of resources to such activities. However, over time some of the NUS bodies developed a research function, particularly some of the larger regional colleges and these were often related to regional topics. Initially the research activity was not planned as a main activity within regional colleges. Gradually some colleges developed extensive research activities based on regional research foundations. These foundations were linked directly to the boards of regional colleges. For example one foundation had 160 of a staff with a strong interest in oil related R and D. In addition a network of technical/commercial competence centres connected to the colleges of engineering are being funded under a government regional development programme. It is expected that these research foundations will grow and develop to include science parks. The interesting point about these bodies is they act as a flexible interface between the resources of the regional colleges and other institutions of higher education and the users of research.

Returning to the courses of the NUS, it is expected, as happens in other OECD countries, that the growth of the research functions of the NUS will improve the quality of teaching. All teachers are free to do research provided that their teaching obligations are fulfilled. In Ireland the research function of the NUS has also been given increased government support in the last few years with the appointment of Industrial Liaison Officers, part of whose role is to seek out research funds for teaching staff. The same bind concerning the priority of teaching commitments however exists in Ireland as in Norway. A significant difference however is that teachers at lecturer grade in the Irish NUS normally teach 16 hours

per week whereas teachers at Norwegian regional colleges teach only six hours. It is expected therefore that the Irish development may have to undergo some revaluation before the research capacity of its NUS sector is more fully utilised. Regarding the quality of teaching, a regional college teacher in Norway has the same qualifications as a university teacher at the same level and at the latter end of the 1980's the position of a full professor was introduced into the regional college system.

The short cycle vocational courses provided by the regional colleges have become a significant supplement to other types of tertiary education. It has, for example, made it easier for pupils to combine studies at regional colleges with university. Transfers between the two sectors are quite common although the great majority of NUS pupils prefer to start work after finishing their studies. Transfers in both directions are of the same order with the movement out of university to the NUS sector the slightly larger of the two flows.[44] Normally these transfers are not caused by failure in the course being followed and are part of a process whereby degrees may be obtained by combining subjects from different institutions - both colleges and universities.

COMMENTARY

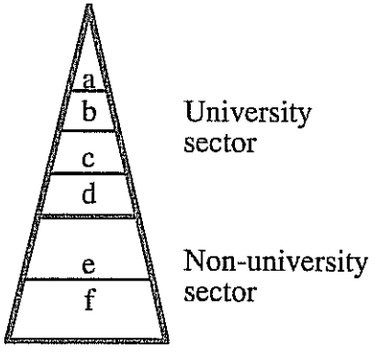
The OECD states that the distinction between the NUS and the university sector has weakened in recent years especially as the more developed end of the NUS, the regional colleges, have become alternatives to the traditional universities. They argue that the relatively low intake into tertiary education in Norway is partly to be explained by the fact that higher education has not achieved, or has slipped from, its rightful place in Norwegian society.The strong concentration over the years on the development of the NUS has pushed the university somewhat into the background and they were unable to defend their interests. In other countries, such as Japan, employers and young people have a more positive view of university.[45] It is also argued that some of the research and new management courses, which should be incorporated as part of the work of universities such as Oslo, are found in places such as independent research and other teaching bodies.The growing research and development activities of the regional colleges has also weakened the universities. For these reasons the OECD argues that

higher education, and especially the universities, needs to refresh its social mandate and the universities need extra funds. The public authorities should, it argues, better utilise the potential of the universities by giving them greater priority when it is funding research.

The OECD, also, makes the point, already made earlier,concerning the need to consolidate the large number of institutions in the NUS. However, it goes further than a simple NUS merger and number reduction process. It proposes that there should be greater efforts to integrate the university and regional systems and that some sort of stratification and differential of function would provide the basis for improving links between the various components of higher education. The OECDs view is that, although the development of regional colleges is laudatory, a system of differentiating the components of the higher education sector according to the level of teacher and pupil is necessary even in the most egalitarian society. The ablest students will not, in the nature of the regional college system, have access to the best libraries or laboratories in the formative years of their life.The recruitment of an academic elite seems to require, it argues, that the ablest pupils come into contact with the ablest scholars in the field.If this early contact requires migration of the ablest pupils to centres of education and research then this is a necessary part of the order of things.[46]

The general principle which appears to inform the OECD in its report is based on a traditional view of tertiary education. This arises from a paradigm of educational differentiation which could be approximated in crude form by the following diagram:

Diagram 2.2: a paradigm of the university and NUS



The levels of quality within the university sector ranges from the few high quality centres of learning at the very top (a) right down to the more modest grade universities. In this paradigm the university sector contains a higher staff,pupil and resource calibre than the NUS which in turn has its own differentiation. The OECD review teams view seems to be, at least partly, informed by the traditional academic-vocational split where the former reflects a more difficult level of attainment than the latter. It implies that if the Norwegian university sector reasserts its position then employers and pupils will reassess its role and the demand for places and graduates will rise. A difficulty with this logic is that, if we take the Japanese case as an example, we notice that it is not solely the quality of the university courses which make it so attractive for employers and young people. Rather it appears to be partly the ethos of 'effortism' which encourages secondary level pupils to aim at getting into the more prestigious universities. Secondly, the employers are attracted to the graduates of these more sought after universities not simply because of the actual content and quality of their courses but also because these universities have succeeded in getting in the very best pupils.

If Norway makes permanent and definite shift of resources to its universities at the expense of the NUS this may indeed work out as a zero sum game.If it moves resources from other public sector areas this would appear more profitable and could benefit the universities while maintaining the verve and attraction of the NUS and particularly its regional college system. This might be a far better approach especially if a further rise in unemployment puts pressure on tertiary education. It may, however,` be politically difficult to reduce spending in other areas and may be easier to extract the extra expenditure from a buoyant economy.

Employment of graduates

The OECD refers to imbalances in the labour market and the weakness of the third level sector in reacting to these imbalances. In this respect, it mentions the tendency among young people to opt for shorter courses and then seek higher paid job opportunities in the private sector. They suggest that it is possible that the attractions of shorter courses and earlier employment may be short lived and that the long run efficiency of the economy requires

retraining and increasing members in such areas as teaching or engineering.They also argue that the educational sector in Norway is rather divorced from the activities of work and the actual needs of the labour market.[47]

Fetveit states that unemployment in the mid - 1980's among tertiary sector graduates was relatively low, leaving this element of the labour market relatively tight. If unemployment occurs it is only a problem immediately after college. A labour shortage exists however in the peripheral areas, especially northern Norway, which has problems recruiting qualified graduates.[48]

Since the above was written the more recent statistics on the NUS/University balance have become available. From 1974 to 1987 all expansion in higher education took place in the NUS both in terms of student numbers and resources. Since 1987, however, growth in the number of university students was very strong and is of the order of 40 per cent or so with a proportionally smaller increase in the NUS sector. Naess and Aamodt argue that this growth and recent change in NUS/University growth balance reflects not only a worsening labour market situation but also what they term a "generation lag." They state that children having parents with higher education are more often recruited to universities than those whose parents are without such education. Today's youth are the children of the educational explosion of the 1960's. They argue that the NUS expansion of the 1974 to 1987 period reflected the then political priorities for a greater vocationalism. Since then the Hernes Commission put a new focus on the role of the universities as did the above OECD report. We will have to wait to see if the new revival of the university sector continues as Naess and Aamodt imply or is solely related to short term labour market difficulties.[49]

CONCLUSION

To conclude we will make two final interrelated points. First, Norway by comparison with other developed countries has come late to the tertiary education sector. Her universities were late arriving in comparison to certain other OECD nations, although her regional colleges were not too far adrift of the international developments of the 1960s. Maybe the reticence apparent in the university sector between 1974 and 1987 was as much a product of

inadequate time to actually establish itself, particularly when at the same time the NUS both internationally and in Norway were undergoing very close attention, as it was due to any other factor. Time will tell how the Norwegian university sector will now evolve and whether the recent spurt in enrolment is mainly unemployment related or part of a new and permanent trend. However the problem of student drop out and slow study progression still remains within the liberally organised university studies in humanities and social sciences and to a lesser extent in natural sciences and maths.[50] The university sector despite its recent revival may still not have achieved "its rightful place." One possibility which should be avoided in any future development is unnecessary duplication in the tertiary sector and to ensure this the logic of the component parts of this sector and their interrelationship could be better clarified.

Second, the Norwegians have brought regionalization of the tertiary sector to a fine art. The localization of regional colleges has both energised the local economy and contributed to the supply of skilled manpower in the peripheral areas. The regional colleges provide one of the major components of geographical levelling of educational and training opportunities.They also help sustain and develop the local economy which they serve.With the strong Norwegian tradition of attachment to people's local area it is perhaps not so surprising that most efforts to merge elements of the NUS have failed. The present trend is to encourage networks and interlinks and facilitate mergers at the periphery rather than from the centre. Countries with problems of rural development and core-periphery inequality will find much of interest in the Norwegian regional college system and the variety of activities which are built around it.

NOTES TO CHAPTER 2

1. See Kennedy (1988)p.14.
2. See OECD (1989,a).
3. See Fest (1990) p.50 and OECD (1992,c)p.40.
4. See OECD (1972)p.167.
5. See Erichsen (1983)p.8.
6. See OECD (1990,e)p.69.
7. See OECD (1989,a)p.68.
8. See OECD (1990,e)p.69.
9. See Education in Norway, (1982)p.6.
10. See Holmes (1979).
11. The above data are given in Rust (1989)p.254.
12. See ICE (1988,a)p.6.
13. See Ministry of Church and Education (1989)p.4.
14. See Ministry of Church and Education (1989)p.18.
15. See ICE (1990,a)p.21.
16. See Bjordal (1987)p.3.
17. See OECD (1990,e)p.27.
18. See ICE (1988,a) p.45 and ICE (1990,a)p.51.
19. See the National Council for Upper Secondary Education (1989,a).
20. For further information a useful reference is National Council for Upper Secondary Education (1989,b).
21. See ICE (1988,19) and ICE (1990,a)p.20 and OECD (1992,b)p.271.
22. See OECD (1990,e)p.26.
23. See Rust (1989)p.282.
24. See Woien (1990)p.1 and OECD (1991,c)p.7
25. See OECD (1972)p.81.
26. See OECD (1985,a) for a fuller discussion of the models and OECD (1989,f) for slightly more up to date material.
27. See Roche and Tansey (1992) p.97.
28. See OECD (1985,b)p.51.
29. See Dolven (1989)p.7.
30. See Winther (approx. 1989)p.18.
31. See Dolven, (1989)p.12.
32. See Chapter 5 in Dolven(1989).
33. See Winther (approx. 1989)p.4.
34. See Dolven (1989)p.10.
35. The above data are based on OECD (1990,f)p.96 and OECD (1991,a,Basic Statistics).
36. See OECD (1988,b)p.11 on which the data is based.
37. See OECD (1990,e)p.89 and OECD (1992,b)p.274 and 275.
38. See Tuijnmans (1989)p.162.
39. See Carlton (1984) on which some of the historical points below are based.
40. See Kintzer (1974)p.306.
41. See Eide (1988)p.8.
42. See OECD (1990,e)p.89.
43. Data based on Ministry of Church and Education (1989)p.26 and OECD (1988,b)p.11 and 30.
44. The OECD (1988,b) report seems to contradict itself slightly here - see pages 25 and 43 - the difference amounts to 2% of the 1984 figure.
45. In making these comments the OECD review team state that they could not assess the quality of Norway's tertiary education and their options on this topic were based on the views of key political figures, academics and administrators. This is a reasonable basis on which to form a view of a sector's position given the difficulty of cross country assessment.
46. The above points are found in both OECD (1990,e) section IV.
47. See OECD (1990,e) pages 41 and 57.
48. See OECD (1988,b) which is written by Anne Marie Fetveit and has a somewhat diffeent status to OECD (1990,e) which apart from the background report is prepared by the OECD on the basis of an examination of the country's education system.
49. See Naess and Aamodt in OECD (1992,b)p.267 - 268.
50. See OECD (1992,b)p.274 - 275.

3 NORWAY

Adult education and training

Adult education in Norway is exceptional by international standards in that it incorporates some activities which normally are included elsewhere. It contains adult education at primary, secondary and tertiary level and alternatives to these. It also includes short courses for adults in folk high schools along with manpower training and in-company training.

HISTORY

A number of background points, some of which we have referred to already, need to be mentioned here. First, Norway is a Lutheran country and the most strongly Protestant country in Europe and it was not until 1845 that people were actually allowed to leave Lutheranism and join other religions. Second, although larger than the UK or Italy, it is the least populated country in Western Europe with one of the lowest population densities in the OECD. In addition there are significant obstacles to communications as one moves from one part of the country to the other. Third, under Danish rule, which lasted four hundred years, Norway's education structures were weakened with the result that there were barely any secondary schools in the country at that time and no third level institution .

The implications of these points for the development of adult education was that the Protestant background was an encouragement to literacy, if only to support religious instruction. The scattered communities led to the tradition of the itinerant teachers. Influences from abroad were also important especially in the case of the Swedish concept of the study circle and the Dane,

Gruntvig, inspired the development of the folk high school. In addition, the 19th century revival of interest in Norwegian culture gave adult education a boost. The real growth of Norwegian adult education goes back to the middle of the 1800s when it was an integral part of the growth of popular movements and voluntary organizations around that time. According to Brattset the purpose of the educational activities of the voluntary organizations was to promote change in society[1] according to their values. He argued that adult education work of voluntary bodies could be seen as an instrument to reach their goals and the study circle was their tool to do so.

Norway, like other countries, had suffered from the international recession of the 1930s and the unemployment which it caused. The widespread concern about this unemployment was part of the reason for the setting up of the Norwegian Association of Adult Education Organizations in 1932 to encourage greater cooperation between the various bodies and to look after their common interests. The type of voluntary bodies which are today involved in adult education include:

- Educational - such as for correspondence courses, the Sami people and the folk university.
- Health - such as for blindness, deafness and other health areas including the Red Cross.
- Interests - such as for music, sport, the interests of young people and the temperance movement.
- Political - such as for the christian democratic, conservative, liberal and socialist political ethos.
- Religious - such as for catholic and christian groups
- Vocational- such as for the cooperative movement in general and for such groups as engineers, farmers, fishermen, housewives, rural organizations and workers in general.

Up to the 1950s adult education was mainly or entirely in the hands of voluntary bodies and by the early sixties there was a

growing need for a full review and development of the area. This was so because there was no specific legislation governing adult education. Rather there was a number of laws which affected the education of adults such as university acts, the Library Act, the Correspondence Schools Act of 1948 and the Folk High School Act of the following year. As a result of the growth of interest in adult education, and the fact that not just the popular organizations and voluntary groups but also the manpower authorities, private companies and the education sector, were all involved in some or other type of adult education, a need arose for a more organised approach to adult education. The desire to move away from the piecemeal approach became quite strong in the early 1960s and resulted in the 1965 Storting Proposition No. 92 On Adult Training. This White Paper was approved by parliament and by royal decree on the 9th of April. It had been issued by what was then the Ministry of Church and Education and provided a wide range of recommendations of which the more important for our present purpose are dealt with below.

First, it underlined the distinction between what is called fundamental education and post-work education. This will be mentioned in the context of the Act.

Second, it recognised and proposed the expansion of the following areas of adult education:

- leisure courses which were not examinable and which were within the ambit of the voluntary bodies,
- formal secondary school examinations which were part of the public education sector but in which the voluntary bodies might have a role to play,
- vocational training which the Ministry of Education, the Directorate of Labour (part of the Ministry of Local Government and Labour) and employers were all involved in.

Adult education in these three areas should be on the same footing with one another and with the formal education sector.

Third, the definition of adult education included not only liberal and formal education but also vocational or professional training.

The White Paper argued that there should be no sharp distinction between professional training and general educational training of adults - or between 'useful' and 'useless' knowledge. The very fact that an individual seeks knowledge - that he wants to know more about his trade or profession and about the community in which he lives - is valuable as such'.[2]

This according to Titmus is the most significant statement in the Proposition in that it sets the basis of a comprehensive policy of adult education.[3] A fourth recommendation referred to the need for research and training in the area and proposed a national administrative and advisory body on adult education. Finally, the adult education act which finally came in 1976, was promised.

Following the 1965 Proposition, a special adult education department within the Ministry of Education and the first State Council on Adult Education as an advisor to the Ministry were set up in 1966. In 1968 reforms were introduced which allowed adults to do individual exams at primary or secondary level rather than in the normal pupil groupings as before. Adults could also do the particular subjects they wished and over time in the order they chose. The schools had to arrange the exams and also provide the necessary courses for adults who wanted to get a complete primary or secondary education, while the voluntary organizations helped prepare those who only took one or a limited number of subjects. This meant that the range of activity of some of these organizations now went beyond the traditional study circle to include primary and secondary courses. Therefore voluntary bodies now began to encourage non-members to become interested in their new educational activities. Prior to this their activities were aimed at their members.

The government appointed a committee to outline proposals for the promised adult education act in 1970 and this completed its work at the latter end of 1972. The committee's report was debated by a large variety of individuals and groups. However, opinions varied quite a bit, especially as regards the major proposals, and consequently it became very difficult to arrive at any type of common approach. The actual bill itself was tabled by the Ministry of Church and Education and was coordinated with the white papers on cultural affairs and higher education and the legislation on secondary education. In addition the secondary and higher education sectors were also being organised so as to improve their

ability to provide for improved alternation between education and work. The bill was presented to parliament in 1975 and was passed on 28th May 1976 and became law on 1st August 1977. In addition to this benchmark act which we will look at next, the Norwegian Institutes for Adult education and Distance Education were established respectively in 1976 and 1977.

ADULT EDUCATION ACT 1976

The main purpose of the 1976 act was to 'help the individual attain a more meaningful life.....(and) contribute to providing adults equality in access to knowledge, insight and skills'.[4]

The Act again makes the distinction between fundamental adult education and post-work education. The former provides the base for further learning throughout working life. It refers to the primary, secondary or higher education sectors and the different courses here take their legal status from the relevant legislation for each of the various educational levels. The Act also refers to what it calls alternative fundamental education for adults. This refers to courses which allow for alternation between work, education and other activities and whose context and exam system is adjusted to the needs of adults. This type education is given legal status in the Act while the schools and colleges are responsible for providing these alternative courses. In addition, according to Dalin, the voluntary bodies are given 'equal possibilities' for being involved in developing and implementing such courses.[5] To set up such courses requires formal approval and their level of financing is the same as regular education.

Post-work adult education refers to recurring periods of education where the total stock of knowledge acquired in both fundamental education and from community, work and personal experiences is added to. It too is provided by the secondary or higher education schools and colleges. The Act also deals with short courses for adults at folk schools and study work such as in study circles organised by approved voluntary organizations. The latter courses are not restricted by specific curricula or exams and are closely linked to the professional or personal interests of the voluntary bodies. The final area of adult education which the Act refers to, and which makes it relatively unique, is vocational training for adults under labour market policy and company

training. We will cover both of these elements under the section on manpower training.

ADMINISTRATION

The Ministry of Education and Research is today responsible for adult education and is advised by the Council for Adult Education. In addition the Labour Directorate within the Ministry of Local Government and Labour operates the labour market training schemes which we will look at in more detail later. Below the Ministry of Education are the county authorities, the municipal authorities, the schools, universities, colleges and voluntary organizations.

Adult education is mostly provided by schools, voluntary organizations, third level institutions and the manpower authorities. Schools are responsible for both the primary and secondary adult education courses and other courses at these levels. To become an approved body entitled to grants a voluntary organization must have adult education as one of its main activities and must have structures which give participants, as a group, a reasonable level of influence on the content of study circles, etc. In addition these organizations must have their leadership elected by members, must be based on individual memberships or on collective membership of organizations with individual members and must be open to everybody. The above conditions are detailed in chapter three section 10 of the Act and arise firstly from the government's interest in improving equality and democracy in society and secondly from a strong interest in having adult education as a service which would take into account the participants' own agenda as well as the other relevant parties. This indicates according to Dalin that adult education could have a two-sided role in society.[6] First, it can be used as a tool to adjust people to the needs of society and second to help emancipate adults from being purely passive to such changes. This dichotomy he argues can have an influence on personal and professional development and society's improvement.

At present there are over 40 voluntary bodies which are entitled to state grants.[7] Basic education in primary and secondary schools for adults is free and is a municipal activity up to lower secondary and a county activity at upper secondary. In recent times the

government has concentrated on increasing the participation level at upper secondary and has put less effort in developing it for adult education. In recent years around 90 per cent of 16 year olds stay on in secondary school. However by the latter part of the 1980s still only two thirds of the population over compulsory school age had more than compulsory education.[8]

For most other areas of adult education there is a public grant of 80 per cent of the approved costs. For this reason participants can be charged fees to bridge the gap in covering costs. Most of the funding comes from the Ministry of Education and Research except for vocational courses for labour market policy which comes from the Ministry of Labour and Local Government as we will see later. It is worth noting here that approved courses in firms and by national associates of industry are also funded by the Ministry of Education. Grants are also given to fund adult education for priority groups such as refugees, immigrants, handicapped and people with heavy family obligations. Finally, adult education at third level is organised partly by private organizations and partly by higher educational institutions. Study circles at higher level have to be first approved by the relevant regional college board.

DISTANCE EDUCATION

Adult education in the form of correspondence courses or distance education comes under separate legislation to adult education generally. The 1948 Correspondence Schools Act and the 1969 revision provides the legal basis for correspondence schools. The first correspondence school in Norway goes back to 1914 and that school still remains the largest such school in the country.

The 1969 revision of the 1948 Act provided a sort of base, within the then Ministry of Church and Education, for the preparation of the 1976 Adult Education Act in that it widened the power of the Ministry in the adult education area. The Ministry has greater powers in regard to correspondence schools than in the wider adult education area in that such schools cannot operate without its approval, whereas adult education organizations can, except they receive no subsidy. The State Council of Correspondence Schools assists the ministry in supervising the schools and in examining new courses.

In 1978 there were 36 approved correspondence schools where

there are 25 today with 20 approved for state subsidy. The schools provide about 1000 different courses the majority being vocational or leading to formal qualifications.[9] Several of these schools cooperate with third level institutions in setting up these courses. There are four ways of taking a correspondence course. First, a student works alone on the material posted to them and returns it for correction. Second, a student studies both alone and in class. This is called a combined course. Third, a student participates in a study circle which works as a unit on assignments and projects sent by the school and returns these as jointly completed works. This is called a correspondence circle. Finally, the course is an integrated one which may include elements such as a study circle, text books or other course material, cassettes, radio and/or TV programmes. This is called a multimedia course.

Distance education at third level was provided only by independent educational bodies up to the 1970s. Since then however, and especially in the last decade, a number of universities and regional colleges became involved. At present there is a considerable growth in the use of modern technology in distance education and pupils and teachers can now make contact by combining computers and telecommunications. In this regard the Norwegian Institute of Adult Education, set up in 1977 to do research, information, development and documentation, has become heavily involved in the development of TV /radio/video and text material for adult education.

According to research reported in the early 1980s the proportion of correspondence students in Norway was then the highest in the OECD.[10] Whether this is still true or not it is fair to say that the attention paid to distance education by the authorities and society at large is by any measure relatively substantial. Why this is so is difficult to say. First, it could be argued that the public sector's support in the area has played a significant role in its development. In addition, the difficulties of educating scattered communities by local teaching units often left it more suitable for correspondence school provision. Whereas the former point does not appear relevant in the case of Japan, with its great thirst for post-education learning contrasted with its relatively small public sector, the latter geography point was not relevant for the strong development of distance education in Holland and the UK. It is difficult therefore to pin-point a single cause for the strong correspondence school

sector in Norway. It is fair to say that this sector grew vigorously during World War II when the partial breakdown of the state school system gave it a significant boost. It is not surprising then that the 1948 Act immediately followed this period but it was itself followed by a period of decline and stagnation until the 1960s. It is to be expected that as long as course developments meet the society's needs and the quality of the product remains high, then the correspondence movement in Norway can look forward to continued growth, especially with the increased use of new technology in the area where the interface between the pupil and the material can be improved.

FOLK SCHOOLS

The folk high schools are a typically Scandinavian phenomenon with a long and rather unique tradition. The roots go back to ideas of the Enlightenment and the first of these schools was set up in Denmark in the last century by Grundtvig. The concept spread throughout the Scandinavian countries including to Sweden as we will see in chapter 4.

They are residential schools for young people mainly between 17 and 22 years of age. Their educational ethos and methods aim to encourage a positive attitude in their pupils and the development of personality rather than success in a narrow academic field. In addition they have normally offered general courses without a formal curriculum or exam. They also place great emphasis on the learning process of pupil-teacher contact in non-class hours. They are mainly private and operate outside the upper secondary school system on the basis of a June 1984 Act. They receive 90 per cent state grants and offer mainly six month and twelve month courses. Since 1985 they have also offered shorter more specialised courses. In recent years there has been a fall in the numbers attending these schools paralleling the general growth in the upper secondary school system. In the latter half of the 1970s there were around 85 such schools with 8,000 pupils. At the end of the last decade there were about 80 schools with 7,000 or so pupils.[11]

COMMENTARY

Adult education benefitted from a strong period of growth in the

early sixties which was encouraged by the 1965 White Paper. This growth continued into the seventies. From 1976 government support added to the growth in the area and by the early 1980s about one quarter of adults or about 1 million people took courses each year. Between 1981 and 1985 the level of government support declined, this being most noticeable for voluntary bodies. Since then this has increased again in absolute and relative terms. However the most recent statistic shows the numbers taking adult education still being significantly down on the early 1980s figure.[12]

The 1976 Adult Education Act is the most comprehensive of any Western European measure in that it covers almost the whole range of what is understood as adult education. The only significant omission is distance education and folk schools which are both covered, as we saw, by their own legislation. Norway is unusual, if not unique, in that vocational training of adults is included in the 1976 Act. In most other countries this is covered by separate legislation under the direction of the manpower authorities. In Norway, although it is operated by the Directorate of Labour, the principles of most of its funding are similar to those applied in the Act. By treating adult education on an equal footing with compulsory education, Norway has produced a law which is as close a counterpart as possible to school laws.

The Norwegian adult education system has a relatively large level of state involvement in its organization, much stronger for example than places like Japan. Whether this is a good or bad thing from an economic perspective is very difficult to say as there has been no full evaluation of the system. However, one cannot deny that the state involvement came in to further support and encourage what was already a relatively well developed, system which would seem to indicate that the strong state support was supplementary and additive rather than being its raison d'etre or intrusive. In addition state involvement here was part and parcel of her social democratic system.

However, despite the above merits, the Norwegian system has had its own lacunae. First, pupils numbers have fallen in the last decade and a 1986 Royal Commission on lifelong learning stated that there had been inadequate educational planning in the area especially since the growth in educational resources for adults had mainly benefited young adults and not the older ones. In addition, the OECD argued that the interlink between adult education and

the tertiary education sector needs improving. There appears to be some lack of clarity about the allocation of responsibilities along with some restrictions on the access which voluntary bodies have to the facilities of these higher education bodies. The OECD also argue that the local authorities could be more effective in their linkage with the voluntary bodies. Finally, adult education could be more effective in improving manpower skills for the needs of the economy and for this reason its links with local colleges could become stronger.[13]

It is this latter point which reflects the more topical focus of debate today. The main concern of the 1976 Act was to attain a more equitable education system with regard to age in particular but also region and sex and to have the adult education structures reflect a democratic ethos. Much of the debate at the time referred to need for greater equality of opportunity and personal development and these sentiments were probably more strongly held in Norway than in most other OECD countries. By contrast, the 1980's concern with satisfying the educational needs of the labour, market and the need for a qualified labour force for innovation, high quality produce and international competitiveness, also became part of the Norwegian debate. Today Norway is more concerned than ever with employee development and continuing education. In this context while 37 per cent of adults took adult or continuing education only nine per cent of those were leisure-related and 29 per cent were work related.

It is argued that this new situation may need a different organizational and financial structure to sustain further growth.[14] Whether this is so or not is difficult to anticipate. We can say, however, that the adult education system in Norway has made a significant contribution to Norway's learning process. In addition, voluntary associations have developed to reflect the new vocationalism of the eighties and the nineties by expanding their vocational courses in all areas.

MANPOWER TRAINING

Labour market training under the 1976 Adult Education Act covers the following two areas:

(i) Vocational training for adults as part of labour market policy.

Section 23 of the Act classifies its contribution in this area under the heading of labour market courses and states that these are to be run in cooperation with the labour market authorities.

(ii) Company training given in a firm or in connection with one. Section 20 of the Act calls this industrial training and states that it may be organised in cooperation with a public educational institution, a folk high school, an organization eligible for subsidies, a national association of industries, or by the company itself.

The support for company training provided by the adult education budget requires certain organisational structures. For example, trainees must be able to influence the content and organisation of the training through, for example, a representative body in the industry on which the employer and employees are equally represented. In this type of situation the state can give 80 per cent of the approved cost.

Even in good times, however, no firms applied for state funds from the education ministry towards continuing education for its labour force. This was because, firstly, firms did not develop representative bodies for education. Secondly, other funding sources for training were available. For example courses for union representatives for which the 1976 Act provided 50 per cent support. Also for the retraining of employees in firms in danger of closing down. In addition to this, Brandt argues that managers or training officers in firms have not seen the 1976 Act as relevant.[15] The in-service training of employees in the civil service, the army and other areas in the public and private sectors, can be supported from the ordinary budgets of various ministries and by foundations specially supported by regular contributions from employers and employees.

Labour market training had already been going on since 1958 and the aims of these courses had been to provide training opportunities for unemployed people, to improve labour skills and to reskill people for new jobs. Vocational training had been financed by the then Ministry of Work and Municipal Affairs (now Ministry of Labour and Government Administration). This arrangement continued after the 1976 Act and was the major exception to the norm that all adult education subsides would come

out of the adult education budget - another exception was the fundamental and post-work education at tertiary level which was financed from the education ministry's universities' budget. We will now look at the work of the Directorate of Labour which provides training under both the Adult Education Act and other legislation.

MANPOWER SERVICES

Manpower training comes under the Ministry of Labour and Government Administration under which lies the Directorate of Labour. The Directorate is responsible for the employment services and has 18 County Employment Offices and 108 District Employment Offices. It is also responsible for four Labour Market Institutes and eight Employment Counselling Offices. Altogether these bodies employ 2,600 staff.[16]

The employment offices are responsible for providing:

- occupational information
- training measures
- unemployment benefits and financial support for those in various labour market schemes.

There are also 32 labour market educational centres which come under the upper secondary school system but which are financed by the Directorate. The table below provides an overview of the Directorate's work since 1980.

Table 3.1: Labour market schemes - numbers and levels employed

Manpower Schemes (excl. rehabilitation)	**1980** %	**1985** %	**1989** %
Skills training	53.1	39.0	61.0
of which:			
labour market courses	(36.9)	(16.2)	(31.5)
Programmes preparing youth for work/trainee places	(16.2)	(22.8)	(29.5)
Public sector employment measures	39.1	47.0	18.0
Wage subsidies to employers	5.0	7.8	10.6
Enterprise related measures	2.8	6.2	9.7
Grants for firm start-ups	-	0	0.7
Total	100	100	100
Numbers on schemes (monthly average)	7,603	25,505	37,857
Percentage of registered unemployed	34.1	49.6	45.7
Unemployment rate	1.3	2.5	3.8
Percentage of labour force on schemes	0.4	1.3	1.8

Source: Employment and Manpower Measures in Norway, Ministry of Labour and Government Administration, Department of Labour, receipt date January 1991.

As we can see in the table above the skills training area is by far the largest element of active labour market management and its relative significance has increased over the decade. In addition, the original data source shows that the absolute numbers in training have increased by four and a half times over the period in contrast to the numbers for all schemes which increased by four times the 1980 figure. The variation in the numbers on these schemes correspond quite well with the change in the unemployment level.

For example, between 1982 and 1983 the numbers on labour market schemes almost doubled and during that period the unemployment rate increased by over a half from 2.0 per cent to 3.1 per cent. Likewise in the 1988-89 period when the unemployment rate expanded by 65 per cent from 2.3 per cent to 3.8 per cent, the absolute numbers on labour market schemes increased by well over three times. As regards labour market administration staff the data show that staff levels increased by almost fifty per cent between 1981 and 1989, a period during which the absolute number unemployed almost doubled.[18]

MANPOWER SCHEMES

The Directorate of Labour operates and is involved in a wide range of schemes. Using for convenience the general headings on the above table, we will first outline the non-training schemes or those which have only a small training component.

- *Public sector employment measures.* These schemes operate to provide employment opportunities or work experience for the unemployed in municipal or county activities, non-profit organizations and government bodies. This is done by providing additional jobs in such bodies and for which an allowance can be provided for up to six months. These jobs qualify for 100 per cent funding and the support for local funding can vary according to the unemployment and local economic situation. In addition, apprenticeship positions are available to unemployed people in government bodies and these are additional to the institution's normal labour needs including apprentices.

- *Wage subsides to employers.* These measures are aimed at help -ing certain unemployed categories find an ordinary job with normal pay and conditions and are open to employers in both the public and private sector. Such groups as the long-term unemployed, refugees with little training, etc. are targets for these schemes.

- *Enterprise related measures.* These include a number of schemes which operate through specially set up enterprises or provide

support to enterprises. For example, one of the schemes supports firms hit by compulsory liquidation` by postponing the lay off of staff during the reorganization of the firm or until labour market conditions are better. A numerically much more significant scheme is the Labour Market Enterprise Scheme. This provides sheltered employment in a transition firm for those who need such employment before they move on to ordinary jobs. The purpose of this scheme is to improve the job seeker's chances of entering the labour market, or beginning a training course. The enterprise may provide either practical experience or a combination of experience and training. These work practice places are essentially for first-time job seekers mostly for those under 20 years of age although this limit is not rigidly applied. Young people who have not obtained a place at upper secondary are given priority. In addition, women who have not been in active employment for a period and who wish to go back to work have sometimes taken this option. An essential component of the scheme is that the participant must be actively seeking work but is not actually working and those on the scheme are expected to continue seeking work. The normal practice period is 26 weeks which in special circumstances can be extended to 40.

Most of these enterprises are organised as joint stock companies in which local authorities, firms, humanitarian bodies and interested individuals buy shares. These enterprises also play an important role in vocational rehabilitation, job training and skill testing so as to help people choose an occupation. They can also provide longer term employment for vocationally handicapped people with poor employment prospects. The Directorate provides funding to help set them up and support their education. There is also a scheme to help unemployed people develop business ideas and to become self-employed. Priority is given to high unemployment areas.

- *Other measures.* As we will also see later with Sweden, the payment of unemployment compensation in Norway is made by the labour authorities which helps to coordinate better the interface between passive and active labour measures. This

link tends to be weakened when they are in separate departments or ministries. One of the related schemes is the working for benefit measure which lasts for six months with the possibility of a four month extension. There is also a labour mobility scheme to help reduce the geographical constraints in the labour market. In addition to the above there are a range of schemes targeted at the handicapped as a group with particular labour market difficulties. We will now look at the various training schemes which are our main focus of attention.

Training Schemes

There are a wide variety of training schemes provided fully or partially by the Directorate. The most interesting ones here from an international perspective are the adult vocational education courses organised in partnership with the educational authorities and drawing their legal status from the 1976 Adult Education Act. In certain other OECD countries it has been noted that there are inadequate links between the vocational education institutions and the training component of the manpower authorities. In Ireland, for example, it has been noted that the vocational education system and the labour market authorities could be much better coordinated and at times there has been evidence of duplication and even unnecessary competition between these two sectors. However, this situation has been somewhat improved recently and is to be discussed in a forthcoming White Paper which promises to look at improving the linkage between manpower policy and the education sector.

ADULT VOCATIONAL TRAINING COURSES

These courses aim to provide the unemployed over 19 and others in difficult labour market situations with the training needed to either improve their employability or facilitate their reemployment in other areas. The courses are implemented jointly by the educational and manpower authorities with the former taking care of curriculum planning and the latter ensuring that the courses meet the needs of the labour market. The employers and employees are also involved in determining the training skills

needed and the curricula.[19]

About one third of the courses are run in the 32 local employment service centres which are operated by permanent staff. In addition another one third are held in upper secondary schools and technical colleges and the rest are organised by private organizations and paid for by the Employment Services Division. In the last few years as unemployment has increased these courses have played an important role in the efforts to curb unemployment. In 1987 there were 11,300 participants whereas in 1988 there were 13,500 on 1,040 separate courses with an average of 13 per course. By 1989 the number of participants had expanded almost four times to 51,000 and in 1990 this went up again to 60,000. In 1990 some 500 different courses were organised some of which were repeated several times so that in all more than 4,000 separate courses were held with an average number of 15 participants per course.[20] The Employment Services Division determines which courses are run, selects the participants and tries to ensure that they are geared to the needs of the labour market. The courses vary from basic introductory courses right up to post-technical college level and cover such areas as the engineering trades, building and construction, commercial and clerical occupations. They last anything from one week up to ten months and while in the mid-eighties 10-12 weeks was the norm in recent times the longer courses have been given increased priority. Each course gives a formal qualification based on one or a number of exams and courses are also arranged so as to provide people with a trade certificate. In addition to their being no course fee the participants are also given an allowance. This allowance may be given in the form of unemployment benefit, a course grant (which depends on age and dependents) and in some cases a rehabilitation grant. Travel assistance can also be given as can a parent allowance depending on the circumstances.

YOUTH WORK TRAINING GROUPS

This scheme was set up to give work and social training to young people with an irregular or abberant way of life involving drink, drugs, crime, etc. It is thus geared to those who are unable to take part in the ordinary training and employment programmes and it aims to provide a base to such schemes or work if it becomes

available. The programme is run by the Directorate of Labour in collaboration with the municipal authorities.

The young people on each scheme are divided into training groups consisting of 5-7 members and a group leader. Each group carries out work tasks in either a municipality or government agency for a three month training period. This is followed by another three months in a training task or in a sheltered job. Each group has a certain degree of autonomy and the leaders are qualified to deal with young people and work to a special rehabilitation officer who is responsible for 2-3 groups. Support for groups and their members is also provided by the local welfare and health administration and by the organizations from which the members were originally recruited. Each member is paid an ordinary wage by the municipality which is subsidised by the central authorities. Research has shown that about 65 per cent who go through a full training period succeed in getting a job or take some form of further education or training.[21] This has to be considered as a reasonable impact given the nature of the problem it is trying to tackle. However, one would need to see the level of retention in such groups before one could offer a more complete comment on the scheme.

WORK EXPERIENCE AND TRAINING

This scheme is targeted mainly at young people below the age of 20. It is aimed at increasing jobseeker's chances of getting normal employment. The measure can last from 6-9 months and includes segments which contain vocational guidance, work experience, training and knowledge about working life. The participants are put through those elements which best suit their needs. For example, those below 20 are given mainly work experience in ordinary public or private firms while others may be given mainly vocational guidance and training. The participants receive a daily allowance. This particular programme began in 1985 and was partly an amalgamation of previously separate schemes.

IN-PLANT TRAINING

This scheme is aimed at firms experiencing difficulties in maintaining their staff levels due to recession or structural

problems. The training is used to increase the skill level in the firm, introduce new technology or production methods or improve productivity and efficiency.

The training is initiated by those firms which are having difficulties in maintaining their employment levels and it takes place on site according to training plans which are approved by the Directorate. It should be noted that this scheme does not support the ordinary training needs of firms and applies to the following type of participants:

- workers in firms with structural problems
- workers who need to be retrained for jobs where there are problems getting qualified staff
- unemployed who have got work through the manpower authorities and who need training

The firm can apply for half of the total wage cost up to 13 weeks and by taking new staff in non-traditional areas the support can reach 75 per cent. Support at fixed rates may also be given for running costs.

Overview and Commentary

The proportion of funds spent by the labour market administration in the different areas are outlined in the table 3.2.

Over the above period the overall expenditure by the labour market administration fell dramatically with the major fall in the public sector employment measures. Skill training also suffered although much less so. The relative significance of the training area more than doubled with the labour market courses taking up an increased proportion of the expenditure in the area. In the table below we contrast the above measures with the vocational rehabilitation measures.

Table 3.2: Funds utilized by the labour market administration

Manpower schemes (excl.rehabilitation)	1985 %	1988 %
Skills training	33	74
of which:		
Labour market courses	(74)	(79)
Programmes preparing for employment/trainee places	(26)	(21)
Public sector employment measures	55	8
Wage subsides to employers	5	10
Enterprise related measures	5	3
Financial aid for firm start-ups	0	1
Others measures	2	4
Total	100	100
Total expenditure (excl. rehabilitation) (NOKm)	1873,0	629,6

Source: Directorate of Labour (1989, Table 15)

Table 3.3: Funds utilized by the labour market administration

	1985 %	1988 %
Manpower schemes (excl. rehabilitation)	68	37
Vocational rehabilitation	32	63
Total	100	100
Total expenditure on vocational rehabilitation NOKm	885,3	1059,7
Unemployment Benefit	2517,9	3176,2

Source: Directorate of Labour (1989, Table 15)

One can see a significant increase in expenditure on vocational rehabilitation and, allied with the drop in expenditure on the other manpower schemes, the relative significance of this area has about doubled over the short period. In contrast to the change of expenditure in the non-rehabilitation area, the expenditure on unemployment benefit increased by over a quarter, reflecting the worsening unemployment situation.

The most interesting aspect of the labour market measures as we have mentioned before are the labour market courses run in conjunction with the educational authorities and these now absorb a significant proportion of expenditure in the area. In 1972 the OECD urged that there should be a closer relationship in Norway between the educational and manpower programmes to enable each to use the other' facilities for upgrading and maintaining the quality of the work force.[22] It is difficult to discern how big an impact this OECD proposal had on the 1976 Act. It is certain however that it helped, if only slightly, in encouraging the inclusion in the Act of the strong tie up between these two learning sectors. Those OECD countries which are concerned about the inadequate coordination between the education and manpower training sectors may benefit from taking a close look at the Norwegian system. There is no doubt that Norway has not solved all the cross sector problems. However, the dovetailing of adult education and manpower training under the 1976 act provides an interesting case for comparative inspection. In addition the Norwegian supports for in-firm training are worthy of some consideration especially as they assist the small and medium sized firm sector. However, some doubts have been expressed about the effectiveness of manpower training. One of the difficulties pointed out are the weakness at the level of the local labour market offices of matching their services to the needs of the local labour market. A partial cause for this is the minor role of the social partners in influencing factors at this local level. According to some, most aspects of the decisions in this area are monopolised by the Government and the labour market authorities.[23]

NOTES TO CHAPTER 3

1. See Brattset (1985)p.3.
2. See Storting Proposition No 12 (1964-65) on Adult Training, 9 April.
3. See Titmus (1981)p.161.
4. See Chapter 1 section 1 of the Act.
5. See Dalin (1977)p.7.
6. See Dalin (1977).
7. 44 according to ICE (1990,a)p.17.
8. See ICE (1990,a) p. 17 and 40.
9. See ICE (1990,a) p. 18 and 35 and Titmus(1981)p.169.
10. See Gaserud, Anders J. quoted in Titmus(1981)p.170.
11. See Ministry of Church and Education(1979)p.8 and ICE (1990)p.18.
12. See Bjorndal (1987)p.8 and ICE (1990,a) p. 33 and 40 for the relevant data.
13. See OECD (1990,e) p. 43 and 44.
14. See OECD (1991,c) p.2-3. It is worth noting that the above statistics in fact relate to as far back as 1986.
15. See OECD (1991,c)p.2-3. Brandt also suggests that another reason is that managers did not know the 1976 Act. This seems a much less plausible reason in the context of all that is known about a firm's ability to identify useful funding sources. It might have been more passable to suggest that firms were not fully aware of the potential benefits of such a funding source.
16. See Woien (1990)p.3.
17. See OECD (1991)p.85 and the original source for the above table. In the above calculations the numbers related to rehabilitation assistance have been excluded. However, the numbers of administration staff used also include those who are administering this area.
18. See OECD (1986)p.19.
19. Data provided by Directorate of Labour, January 1991 and Directorate of Labour (1989)p.10.
21. See OECD (1986)p.15.
22. See OECD (1972)p.81.
23. See Woien (1990)p.7.

4 SWEDEN

Background and education

Sweden has, at over 8 million people, a population similar to London, thus placing it within the group of a dozen or so small OECD countries. It is the fourth biggest country in Europe and has a low population density. It is by international standards, a wealthy economy with a high GDP per capita. In common with other more developed OECD countries, Sweden has a large percentage of its labour force in the services sector and a comparatively small segment in agriculture.

Among the OECD nations, Sweden has the largest current government receipts over GDP ratio, reflecting its very large public sector. Belonging, as it does, to the less populated group within the OECD, it too is quite reliant on foreign trade with approximately the same exports and imports to GDP ratio as its less populated neighbour Norway.

Table 4.1: Sweden - basic data

Population 8.49m	**Area 450,000km^2**		**Density 19 per km^2**
Total civilian employment 4.5m	*Sectors	A	3.6
		I	29.4
		S	67.0
GDP p.c. $22,360	*Government Current Receipts		64.1
	**Exports + Imports		53.1

Source: OECD (1992,a) and Nordic Economic Outlook, June 1991.

* % TCE ** % GDP

Employment

In Table 4.1 above the total civilian employment figure is a little over half the population and on the basis of Fest's data, Sweden has the highest employment to population ratio in the OECD. Sweden faced the same international difficulties as its OECD colleagues since 1973 but between 1973 and 1984 it had the lowest unemployment increase at 0.6 per cent. This performance must also be matched against a low unemployment rate - for example Swedish unemployment in the 1960s was 1.5-2 per cent. Only 2 per cent-2.5 per cent in the troubled 1970s and in the early 1980s it went to 2.5 per cent-3.5 per cent. In 1991 it was as low as 2.7 per cent and has drifted somewhat in 1992 but is expected to stabilise at 4.1 per cent in 1993.[1] Before we look at the education and training system in Sweden, we will briefly review the more general reasons for their low unemployment.

First, low unemployment in Sweden can be partly explained by the high priority assigned in Sweden to maintaining full employment and the fact that there has been a strong consensus among all political parties to pursue full employment. As a result the employment prospects are incessantly watched for any problems. This full employment approach means not only low unemployment but it also means that as many as possible outside the labour market are given the chance to work - one result of this is that despite its low unemployment its female participation rate is very high internationally.

Jonzons argues that the discussion on full-employment in Sweden had been conducted from the very start in economic terms and had derived its strength from persistent painstaking education, for example in the trade union and political study circles. This, he argues, is in contrast to the less prosperous countries in Europe where other factors such as poverty and distress have driven out the concern for work. Swedish labour relations in the early decades of this century were characterised by an enmity and bitterness unmatched in many other countries. Following this experience the Social Democrats were elected to government in 1932 on a platform of industrial peace and the ending of unemployment.[2] We will now look a little closer at this development partly because it tells us an interesting story of economists and policy makers, but more importantly because it impinges upon the development of policies

in the vocational education and training area as we will see in the next section.

The Swedish approach to full-employment developed over a period of years, beginning in the 1930s. The great recession did not hit Sweden until the first half of the 1930s. The numbers out of work rose from 32,000 in December 1930 to about 200,000 in March 1933 and almost 80,000 of these were receiving neither dole nor work relief. Around then a small group of economists such as Myrdal, Lindahl and others known as the Stockholm School began to contribute to the political debate on Sweden's economy through their writings. Lindahl at the end of 1932 gave a speech to the Economics Society in Stockholm on 'Public Works in Time of Recession' and it made a significant impact on public opinion.

These economists were influenced according to Standing (1988,a)p.2 by Wicksell and Keynes although Lindahl's paper above predates Keynes General Theory of 1936.[3] They were attracted to counter cyclical policy and their views were taken on board by the new Social Democratic government of Autumn 1932. By the beginning of 1934, over 60 per cent of the unemployed had jobs on relief work while the rest were receiving cash payments. From then on the economic recovery was fairly rapid.

Despite some criticism at the time by other economists, most people were of the opinion that the new ideas worked well and saved Sweden from the worst of the recession. Their success greatly enhanced their prestige and by their services during that period the Stockholm School, in particular, earned for themselves and their successors, a permanent role in their country's policy formulation process. In regard to institutionally establishing the full-employment approach, the first step was taken in the Myrdal Report of 1944, which established full employment as an explicit objective of government policy. This forms one of the basic roots of what we now call the Swedish model. This was crystallised in what has come to be called the 'Rehn-Meidner model' after two economists with the Swedish Trade Union Confederation (LO). This model culminated in a report submitted to the 1951 LO congress. The prime concern of the model was to alleviate the conflict between full employment and price stability. It had the following components.[4]

(a) Fiscal policy should be mildly restrictive to

check inflationary pressures and to encourage long-term investment.

(b) An active labour market policy should complement the restrictive demand policy to obtain full employment by reducing labour mobility problems, bottle-necks, structural adjustment difficulties by training and so on.

(c) An equitable wage policy based on equal pay for equal work including on centralised collective bargaining between the union and employer confederations.

(d) A welfare capitalist approach with a welfare state as a strong safety net and economic growth and investment to be left to private sector firms.

The term the 'Swedish model' is the invention of the Frenchman Jean-Jacques Servan Schreiber who coined the phrase in 'The American Challenge' published in the late 1960s. Around that time and until the end of the 1970s this model inspired people in other countries who were challenging conservative forces. At the end of the 1970s it was the turn of the conservative forces in Sweden and abroad who began talking about how it was to blame for Sweden doing badly. In the latter half of the 1980s, its star in the international arena rose again and as we move towards the middle of the 1990s the weakened state of the international interest in planning seems set to send questioning looks in its direction. Yet in spite of all this Sweden thrives and its jobless rate is still exemplary.

The above model does not mean that its ideas were always implemented. For example in regard to (a) above Therborn explained that to fight unemployment Sweden adopted a vigorous expansive fiscal policy in the 1970s and early 1980s and Rehn himself in 1985, referring to the same approximate period, said it reflected a trace of vulgar Keynesianism or careless reflation.[5]

Regarding (b) above the OECD said that Swedish low unemployment could be partly explained by the fact that its labour market agencies were converted from passive agents to those actively seeking full employment. A quarter of the OECD countries spend more on labour market policy than Sweden but no country spends more on active measures than Sweden, which account for

almost three-quarters of expenditure.[6] Even the most passive of supports - the dole payments - comes under the Ministry of Labour in Sweden rather than a Ministry of Welfare where policies concerning developments on such payments would tend to be part of a separate life.

Regarding (c) above Calmfors, Lars and Hohn Drifil argue that highly centralised bargaining structures are more employment efficient in Austria. In Sweden, government is not as involved in the bargaining process as in Norway, with its statutory intervention and Austria, with its strong social partnership. Whether the model then was always implemented or whether indeed it was even contradicted by events is not quite as important as the rationality and focus which it gave to economic policy over the years.

In addition, as with the other four countries in this volume, being outside the constraints of the European Community (EC) has allowed Sweden a certain leeway with employment related policies, as for example in her direct subsidies to private companies, mainly steel and shipbuilding, (which would otherwise have to be regulated according to EC rules) and her devaluations. Her leeway in employment related policies will be somewhat restricted, if she joins the Community.

Background To Education And Training

Education and training is a very important component of Swedish society. Sweden has traditionally valued education and, more obviously than many other countries, she has linked her prosperity and social advance to education and training and has been prepared to invest a high proportion of her GNP in it. Some, in looking for explanations of this simple fact, have pointed to her relatively prosperous, stable and unified society. This, it is argued, is in contrast to the divisions in Holland (religious) Belgian (linguistic), France (social) and so on. It is indeed true to say that Sweden is a prosperous society - but in the early part of this century it was significantly poorer than Holland, Belgium and many others including France and Czechoslovakia and barely richer than some countries it now easily surpasses such as Ireland and Hungary.[7] We cannot of course accept the interesting proposition of Gunnar Myrdal who was reported to have said that Sweden's rise to wealth was not due to any special quality of its people but rather to luck.

A belief in serendipity's ability to provide such profound and wide ranging benefits is either a humorous interlude which it most likely was in Myrdal's case or else the last refuge of the passive intellect, which it was most definitely not in his case. Luck has definitely no serious place in an analysis of how to improve societies - lucky events happen but not lucky systems.

Abrahamsson, Hultinger and Svenningsson state that education and training system for the OECD referred to the fact that in Sweden education and training are part of the full-employment policy approach. We have already looked briefly at the background of this full-employment ethos. We now review the evolution of labour market policy and the role of training by considering it under the following four phases:[8]

(a) The first phase began in 1948, when labour market training began operating and ran to 1961. The main role of labour market policy during this period was to reduce frictional unemployment and until the 1960s labour market expenditure followed a modest cyclical pattern with expenditure increasing in recessions and decreasing during good times. During this time there was little attention paid to training measures except at the end of the 1950s when a recession saw the Labour Markets Board's (AMS) expenditure grow to four per cent of overall public expenditure.

(b) During the second phase from 1961 to 1969 much more emphasis was placed on the role of training in labour market policy and the concept of full employment came to encompass the potential labour force. Because the 1960s were an excess demand period, there was a tendency to neglect labour market policies initial role as a counter cyclical anti-inflationary route to full employment.

(c) The third phase running from 1970 to 1982 saw some return to counter cyclical expenditures in labour market policy, although expenditure increased more in recessions than it fell in recoveries. Since experts thought that the mid-1970s recession would be temporary, they developed the stop-gap approach of providing job-saving subsidies, recruitment

grants and so on. In addition efforts were made to reduce labour market inequity and accordingly there was a large expansion of training schemes, especially for the handicapped, women, youth and so on. From the start the policy makers had emphasised work instead of income maintenance and therefore preferred to give training rather than money. However the recessionary years of the 1970s saw a steady rise in dole payments, partial work schemes or people leaving the work force. Meanwhile the large growth in training referred to above was mainly focussed on youth and women while older workers received transfer payments. By 1982-83 over 80 per cent of all labour market policy participants were under 25 years or else were disabled and cash support accounted for over a quarter of labour market expenditure.

(d) In the 1970s, as we saw, there had been a gradual erosion of what we could call the 'employment principle' and a move towards a greater emphasis on a dole payment approach. With the return of the Social Democrats to government in 1982 AMS expenditure and regional development assistance increased quickly reaching 3.3 per cent of GNP in 1983-84. With the appointment of a new AMS Director General in 1983 there was a change towards serving the needs of firms directly rather than having the AMS mainly a wing of social policy geared to reduce labour market inequities. Due to improvements in company profits and the low unemployment rate the labour market policy focus shifted to the supply side. In addition, although training continued to be important for influencing labour supply on the external market the focus appears to have slowly shifted to training in internal labour markets. This change reflected an effort to try and improve the quality of labour in the work place in the context of the increasing labour shortages.

An interesting comment by Standing is that Swedish labour market policy has never been primarily concerned with training and related measures although these have played an important secondary role. In general they have been least emphasised in times of high unemployment. Lest Standing's comment on AMS training gives the wrong overall impression, one must note the large volume

of education and training which Swedes receive as part not just of in-firm activities but also of study circles, municipal education and so on. For example, half of the population has taken part in some form of study programme each year. In addition by the mid-1980s over two per cent of workers annually participated in courses which lasted on average almost six months and by the turn of the decade almost a third of her labour force participated in various types of education financed by employers.[9] Sweden today is a learning society equipped with a wide range of structures to provide and encourage this learning. Prior to outlining how this system operates today, we will look briefly at the history of its educational sector.

Evolution And Organization

Sweden is widely regarded as being one of most secular countries in Europe. It is, however, by tradition a Protestant country and the Lutheran church is still the State Church funded by a small tax on its members. By the end of the eighteenth century Lutheranism was more a part of the state system than an independent religious movement. It therefore made no pretension to having a special responsibility for education. However, as in certain other countries, the Protestant ethos strongly encouraged the development of education and, as elsewhere, this partly, at least, stemmed from an interest in peoples' ability to study the bible. In 1686 a church law decreed that the clerk in each parish should teach children to read and each minister was required to examine the level of literacy of parishioners. In the early 1700s a literacy campaign was launched throughout Sweden. Therefore by the time the 1842 compulsory schooling law arrived Swedish literacy was already quite high. This law established the elementary school which was run by a lay board in each parish. In 1849 the already existing academic secondary schools were now included with the new elementary schools to form part of an overall national school system. These academic secondary schools already had a long tradition going back to medieval times. During the rest of the century the movement from an agricultural society to an industrial urban society put new demands on the school system.

By the end of the century pressure developed for a merging of the elementary compulsory school with the academic school. At

that time a pupil started school either in elementary or academic school. Starting in the latter gave much greater opportunity for secondary schooling followed by higher education. The solution to this differentiation problem was that from 1929 onwards the elementary school provided the base for continuous schooling by having a structure within which pupils could leave elementary school at either grade four or six to enter a four or five year lower secondary school.[10]

From the 1930s on most children went to elementary at seven and stayed until the minimum leaving age which moved up over the years to 14 by 1940. By the 1940s however only about 10 per cent went on to the gymnasium.[11] The government appointed a commission in 1940 which proposed in 1946 that a nine year comprehensive school should replace all other schools up to the age of 16. Like many other countries, Sweden had a parallel selective school system at that time with children from upper classes opting for junior secondary school with its theoretical base whereas children from the lower classes staying on in elementary school with its more practical bias. After long consideration in 1962 the Riksdag accepted the nine-year comprehensive school which was made compulsory for all children between seven and sixteen years of age and this was followed by the 1964 change to the upper secondary school which we now look at.

ACADEMIC UPPER SECONDARY

The 1964 decision to set up the new upper secondary school included the following essential changes:

- Matriculation was abolished as were the university exam inspectors who used to supervise the quality of the secondary school leaving certificate.

- Science studies were made a general form of preparation for higher education and economics and technology, the former continuation school lines, were given the same status as the three year general lines.

Since then the higher education sector has begun to place increased importance on other upper secondary results than just the leaving certificate given to those who completed the three year lines of upper secondary. In addition a 1977 reform in higher education

allowed it to take account of work experience as an entrance requirement. However science studies still hold a strong position as a university entrance programme.

The overall impact of the 1964 development was to broaden the scope of general studies while at the same time increasing the variety of leaving certificates within a centrally defined framework. The exact range of available options in any particular school is determined by local decisions. According to Myberg however, the general programme is fraying at the edges. For example the availability of foreign languages, other than English, has been somewhat curtailed.[12] Another development which some criticise is that the 1960s education support for civic ideals has been weakened in recent times by the emphasis on labour market needs. This development is greater in the regionally designed supplementary study programmes which are geared to meet local labour market needs.

VOCATIONAL UPPER SECONDARY

To understand better the particular Swedish approach to vocational education we will refer briefly to how it has developed. From the middle of the 19th century vocational education began to be provided with state support in the form of evening or Sunday school. The original objective was either to provide the training necessary for carrying on a craft skill or for continued study in a technical school. Later on a 1918 government reform divided vocational education into three types: (i) apprenticeship schools which taught basic occupational skills along with some general knowledge; (ii) vocational schools which required previous study in an apprentice school along with some practical experience and (iii) technical schools for male students who already had some work experience and who sought additional training in a specialised topic. These three types provided a school-based general and theoretical component together with the practical element which was to be acquired on the job. The on-the-job part of education was not always available due to the job shortages at the time and in 1921 the state provided support to vocational schools to provide the practical content of the courses also. According to some this is where the Swedish trend towards school-based vocational skills originated.

Another important development was the mid-1930s state funded workshop schools which were set up in eleven high unemployment areas. Following the experience of these workshops, a 1938 proposal suggested that it would be better to mould the overall vocational education system to the changing economic structure rather than such short term responses as workshops in job problem areas. In the beginning the government proposed the expansion of subsidised work-place based instruction. However, the employers argued that the economic conditions prevented them from taking on any extra costs, despite the state subsidy. Instead the local workshops were turned into permanent regional workshop schools and became recognised as equal to the original apprenticeship schools.

While the numbers in vocational schools remained low in the 1930s they grew strongly from the mid-1950s to the early 1960s. The length of the vocational education courses were normally two years and pupils specialised from the start and were taught in what were called production units. In addition pupils were organised by age to reflect the apprenticeship structures of novices, journeymen and master craftsmen. However, one of the aims of this type of education was to provide students with an overview of the production process and what Opper calls its larger social context. She goes on to surmise that this holistic approach may help explain why Swedish vocational education was so little affected by industrial change despite been guided by a national board which contained both employers and unions representatives.[13] The most interesting aspect in all of this was that Sweden failed to establish any apprenticeship law following the demise of the guild system. This may in fact be partly explained by its dominant power ethos which viewed market forces as something that needed to be softened and compensated for by state involvement. What in other countries had evolved into a very powerful apprenticeship system had in Sweden developed as a component of a well-developed state run vocational education system which, at least partly, supplanted the need for a certain type of in-company training.

ORGANIZATION

The Swedish educational system has traditionally been a very centralised and uniform with a significant level of state

involvement. Almost all education is paid for out of public funds and the finances for educational activity are decided politically at the centre. School legislation is passed by the parliament and operates through the Ministry of Education and Cultural Affairs which issues instructions to the relevant bodies. Despite its highly centralised nature it is a more participative system than most others since more bodies have an effective role in influencing central policy than is common in many other countries. The unions and employers together with the method of investigation by commission has created a system which is strongly influenced by public opinion. In recent times the control of education has become less centralised. As far back as 1975, the Rikstag agreed to local departures from national curriculum guidelines. The running costs of schools are divided on an approximate 50:50 basis between the municipalities and the state and state grants have become less specific about their intended use. The municipal educational administrations have now the main control of regional planning for all post-compulsory education. In addition the local education committees have established specialised courses to suit the needs of the region. This deconcentration process continues with the new state funding systems being organised on a standard rate rather than on teacher salary costs. In this decentralist context Myrbergs suggestion is interesting. He argues that one of the major structural changes to be expected in this decade is the arrival of a federal structure of educational planning in upper secondary.

Below the government and the Ministry the central authority responsible for the education system (apart from higher education) is the National Board of Education (SO). This has the role of ensuring that legislation is implemented along with planning for future needs and drafting proposals for government. Under the SO are the 24 County Education Committees which are the regional arm of central government. These committees supervise their own schools, distribute state grants and have practically the same type of planning and drafting duties within the county as the SO at national level. Next come the 280 or so local education committees. These are attached to the municipalities and organise the educational system at the local level.

Education System

In this section we will look at upper secondary education, tertiary and adult education. First, however we will briefly cover the compulsory education sector.

COMPULSORY EDUCATION

A Swedish child starts school at seven years of age and has nine years of compulsory education divided as follows:

- Junior Level — Three years from age seven to 10
- Intermediate Level — Three years from age 10 to 13
- Senior Level — Three years from age 13 to 16

Due to demographic trends the number of pupils of compulsory school age had begun to fall by the early eighties. For geographic reasons some schools provide only the first two levels outlined above but all three stages are usually provided in the same school. All students take the same subjects at junior and intermediate levels and English is obligatory from grade three or four.

When pupils arrive at the senior cycle there are a limited range of optional subjects available for between three and four periods per week. The electives offered in any school must include French and German. Roughly two-thirds of pupils opt for French or German thereby providing most young Swedes with a base in English and one other European language. In certain respects the Swedish compulsory school remains not one but two schools - a six year class-teacher school and a three year subject school.

An interesting aspect of Swedish compulsory schooling arises from the 1976 Act on Working Conditions in Schools. This Act is concerned with developing the pupils' relationship with the two major components of the schools' environment. First, a major curriculum and organizational change was made by bringing community knowledge and presence into the comprehensive school and helped develop the pupils through information and contact with social and cultural life outside the classroom. According to the guidelines of the SO, pupils should be able to take responsibility for certain types of activities during the school day and representatives from social, cultural and recreational agencies should be requested

to help out. In addition, libraries, leisure centres and other premises should be used. This is all part of the movement towards what is referred to as the integrated day. It functions, among other things, to increase pupils' knowledge of local associations, leisure activities, etc. and to broaden the range of their contacts with adults outside the school environment.

Second, the Act encourages the preparation of pupils for the world of work. Each commune set up a School Society and Work Committee (SSA) which co-ordinates the work experience programme of the school. The committee has a full time officer along with representatives of unions and employers. In the junior and intermediate stage of the comprehensive school pupils are introduced to the world of work in a number of ways:[15]

- Parents are invited to the school to talk to pupils about their work.
- Pupils are released from school for a day to accompany their parents to their work place and they are also taken on group visits to such places.
- Pupils are allocated various work tasks in school such as photocopying, setting and serving lunch, library work, minor repairs and so on.

In the senior stage of compulsory school pupils have a minimum of six weeks work experience, some of which is made up of one-day visits. In the eighth grade a pupil will have three one week placements as follows:

- One week in a manufacturing work place.
- One week in an administration, care or teaching work place.
- One week in an agriculture, forestry or services work place.

In their final year pupils have at least a two week work experience placement and their preferences are taken into account as far as possible.

Approximately 97 per cent of pupils complete the final grade of compulsory school and 85 per cent go on to upper secondary school. Of the 15 per cent who leave the school system five per cent start working and 10 per cent receive further educational and

vocational orientation - the youth guarantee for those under 18 years. Pupils can also take time out in order to get work experience or attend school abroad. Therefore upper secondary school students can vary in age from 16 to 20 years.[16]

Upper Secondary Education

The Swedish upper secondary school system is referred to as the integrated upper secondary school. It exists in 280 out of 284 municipalities and is a result of a fusion of the three earlier types of school:-

- The gymnasium with its academic tradition and conservative curriculum.
- The continuation or professional school preparing pupils for sub-university qualifications in commerce and non-degree based professions.
- The vocational school with its wide variety of vocational courses.

The commission which drafted the original upper secondary school curriculum was strongly influenced by C.P Snow's concept of the two cultures and it therefore sought to avoid this dichotomy by introducing more science into social science and arts programmes and vice versa. However, from a pedagogical perspective the integrated upper secondary school cannot be described as a fully integrated school system comparable to, for example, the US high school. The integration, according to Lundgren, is essentially organizational rather than educational.[17] The different courses are often run in different physical units within the same organization. In Sweden one does not think of a school as having only one site, rather an upper secondary school district where a number of buildings provide between them all the various lines. A significant part of the early plans was to provide common courses to students following various lines of study. Yet very few such courses ever developed. In spite of this it is only fair to say that a determined effort has gone to making Swedish secondary school a relatively integrated entity by putting these schools under

the one roof as far as possible and in recent times new efforts have been made in this area.

The upper secondary is composed of two streams. The first stream contains 26 different study lines and is subdivided into three study programmes:

The study lines are listed in appendix four.

- Three - four year academic programme
- Two year academic programme
- Two year vocational programme

The 3-4 year academic programme contains the remnants of the earlier academic upper secondary gymnasium where pupils were guided towards university studies. In contrast the two year academic programme has its roots in the continuation or professional school which prepared the young for medium level professions and the two year vocational lines have their origins in the former vocational schools. The decision to phase out the two year academic economics and two year vocational distribution and clerical programmes and replace them with the retail trade and clerical work option indicated an effort to dissolve some of the boundaries in the school setting so as to reflect better the reorganization of job categories in working life. The new option provides the same work experience as the previous vocational line yet it provides the same academic level as the economics line.

The second main stream constitutes approximately 530 special courses which are taken on completion of compulsory schooling or its equivalent. Upper level specialised courses come after completing a two-three year upper secondary programme or its equivalent. These courses can last anything between two weeks and two years. The approximate numerical split among the different courses are as follows:-

- Courses linked to compulsory school (180).
- Courses not linked to compulsory school education (250 approx.).
- Higher level courses (100).[18]

The organizational connection of these specialised courses to the upper secondary school structure has been a bone of contention for

some time. The target group for the courses according to the most recent ICE report, normally comprises mature students. Although many of those who take such courses have previously completed upper secondary the content of the courses is fairly specialised or else geared to local economies. Present thinking is that most of these courses will be transferred to the adult or higher education sectors.

The broad distribution of pupils between and within these two streams are listed in table 4.2.

Table 4.2: Upper secondary pupil distribution

	%
Three-four year academic programme	40
Two year academic programme	7
Two year vocational programme	50
Special courses	3

Source: adapted from ICE (1990,7).

As we can see half of the upper secondary pupils take the vocational lines and somewhat less take the academic lines. The two year professional lines are taken by only seven per cent with only three per cent taking the special courses. According to Turner the actual numbers in each line are controlled nationally so that output is geared to the manpower needs of the economy.[19] Thus if some lines are oversubscribed selection must be made.

VOCATIONAL PROGRAMMES

As we saw above, the two year vocational programme today contains 15 separate lines, each containing an equivalent standard programme. Before the development of the integrated upper secondary school the type of vocational education for different sectors varied quite a bit. For some, the reform meant an increase in standards (eg. nursing education contained courses of varying duration). For others, a lowering (eg. engineering education where there were several courses of three to four years). The purpose of the new uniformity which followed the 1970 curriculum reform was

the need to match the two year vocational lines with the two year academic lines. Thus, the reform brought the substance and organization of vocational education closer to general studies and moved it further away from working life.

Interestingly, whereas vocational education went through a recruitment crisis in the 1960s, the demand for it increased strongly after 1970. However, it was not the industrial lines which led this growth - rather it was the caring vocations, electro-telecommunication studies and the craft end of the clothing manufacturing and woodwork programmes. In Table 4.2 above, 50 per cent of pupils took the two year vocational line. The increase in numbers taking this line has been boosted by the general growth in demand for upper secondary and by a strong decline in the appeal of the two year theoretical line which on the above data attracts less than a seventh of the vocational line.

The vocational programme mainly qualifies pupils for the labour market despite the fact that the upgrading of its theoretical content enables it to confer general eligibility for higher education. Roughly 75 per cent of all secondary graduates meet the general requirements for tertiary level admission.[20] However, many of the third level courses have special additional requirements beyond this general minimum and therefore only a small proportion of these courses are available to pupils who do not graduate from the three or four year secondary lines. There is thus a strong boundary factor at work within upper secondary between the two-year vocational and longer university entrance lines. Pupils taking the former seldom regard the latter as an easy alternative. In addition the vocational line has its own internal differentiation between the various programmes. For example, the nursing, electro-telecommunications and agriculture lines come close to the university entrance lines whereas the building and construction, metalwork and motor engineering lines are furthest removed from them. In addition the metalwork line is one of those lines receiving the largest proportion of less motivated pupils.

The logic behind the organization of the vocational education element of the upper secondary school was a reflection, to some extent, of the work and organization structures of the 1960s and early 1970s. Firstly the technocrats, responsible for strategic decision making, were to be drawn from the professional graduates of the third level education sector (eg. graduates in engineering,

accountancy, etc.). Second, the skilled workers who operated at the level of production, the customer, the patient, etc. and who were the products of vocational education - in Sweden, for the main part coming off the vocational component of secondary school. Third, somewhere between these two great categories would exist a whole host of technician level workers who would be responsible for day to day supervision and planning and would come from the secondary school sector - they would be responsible for day-to-day activities, work supervision and operational training.

Myberg attempts, somewhat inadequately, to make a distinction between the Swedish vocational and technical components of upper secondary. The technical level represents a higher level of training than the vocational. Take for example, the secondary nursing line which could be considered a first stage within the system of higher education. Tertiary nursing places are more easily got by graduates of this particular secondary line. Similarly the process engineering vocational line could link with the two-year production and maintenance engineering line which in turn could link to an engineering degree. He argues, inter alia, that a twilight zone of unclear responsibilities developed between upper secondary and tertiary education especially as regards the technical and industrial fields.[21] Whereas the professions are in favour of change mainly on terms controlled by the interests of their members, technician structures are more amenable to industrial change. It is in the latter area that he implies the existence of a gap which is now being filled by the strong growth of in-company training schemes.

VOCATIONAL EXPERIMENTS

The level of practical instruction varies between the different vocational lines. Lines such as nursing, building, and social services have had the largest element of work experience with other lines having little if any work place training. Between the late 1970s and early 1980s the vocational education segment of upper secondary school was put under severe strain due to the growth in demand for its product. The government therefore appointed a commission (OGY) in 1984 to draft a new structure for upper secondary vocational education. Their report was presented in 1986 and the government's bill which launched a three-year experimental scheme in the 1988/1989 period was largely based on

this report. The structure of these experiments was as follows:

- *Scope* The numbers involved increased from 6,000 in 1988 to 11,000 or 20 per cent of those in vocational education. The experiments were to take place in areas with varying economic and demographic structures.

- *Length and content of vocational education* To date the proposed extension of vocational education to three years has been accepted. Work place education was expanded in grade 1 and 2 to at least 10 per cent of study time and in Grade 3 to 60 per cent of total study time. The basic skills will be taught in school.

- *Work place role* The work place component is to be related to the syllabus and is to operate under the direction of supervisors whom the work place makes available to the upper secondary school for this purpose. The local education authorities will decide on the course component to be completed in the local firms. These firms will receive a state subsidy to defray the cost of supervisors' time, etc. In regard to the work place role, one of the prerequisites is that students will not have employee status. This makes even their third year intrinsically different from an apprenticeship set up.

- *Course structure* The courses will be divided into modules which will be used not just in vocational education but also in basic labour market training and adult education. As regards the content there is also to be more time devoted to general subjects. At the end of each term the student is to receive a course certificate specifying the successful modules - one of the proposals here is that the certificate should only identify either pass or fail. A final point here is that the course components should not be organised in such a way that each industry or study programme is treated in an isolated way.

One of the early reports on the above experiments says that it will be somewhat more expensive to implement for the local municipalities than anticipated. The fact that such an approach to vocational education can be relatively expensive should not be

surprising. This new development is in essence a school controlled, firm supported, training structure and to a significant extent it is to be expected that he who calls the educational tune pays the penny. The eventual size of that penny will to some extent depend on how the school operation fits into the moving patterns of the firms in which it places the pupils. If the placement can be done in a relatively frictionless way, then firms will be happy with the cost/benefit structures. However, if this is not the case, either pressure will be applied to readjust this balance or the quality of the work place schooling will suffer. This latter point is the result of static analysis and it must be considered a possibility that, as the school-firm link becomes established over time, it may develop its own internal mechanism which may evolve to better connect the firm and the school segments. One way or the other, this is a fundamentally different approach to work place education then the apprenticeship model where the firm pays the penny and the pupil has employee status. In this model, competitive realities can pressurise firms, to at worst, use apprentices solely as a form of cheap labour and this tends to occur more frequently in the vulnerable and small firm sector.

Whatever the eventual outcome, of these experiments, it is certainly the case that these plans will bring Swedish vocational education into closer contact with the employment sector and provide greater scope for local labour market influence. Paralleling this move by the education sector, it is worth mentioning here that the employment sector has, independent of movements in the education sector, shown a significant increase in interest in in-firm training, something we will return to later on.

Apprenticeship

As we saw in our discussion of Norwegian education, Sweden is a good example of the schooling model in the post-compulsory phase. This is due to its school system having almost a monopoly of education and training at this level along with its high level of school participation. Sweden therefore stands out as one of those countries which contrasts strongly with the dual model apprenticeship countries of Switzerland, Austria and Germany. In 1974 Sweden had only 1,000 apprentices with a recent figure putting it at 6,000 still leaving it only slightly more than 0.1% of total

civilian employment.[23]

The apprenticeship system in Sweden is the joint responsibility of the local school and the employer. The normal duration of an apprenticeship is 30 hours per week for two years over a 40 week year.[24] There are only a few apprenticeship and industrial schools and despite the six fold increase in the number of apprentices over the last 20 years or so apprenticeship has a negligible role in the Swedish system. Why is this so?

The first point relates to the certification of training. Tuijnman states that though this question was important in a number of other countries to both the unions and the professional bodies, it has not as yet aroused much concern in Sweden, at least among the labour movement. He provides two possible reasons for this. First, the Swedish labour movement is, at least to some extent, committed to the solidaristic wage policy of equal pay for equal work regardless of qualifications. Second, the recurrent education strategy of the Swedes which aims at doing away with terminal stages in the formal education sector by providing sector choices and also by having a reasonably well structured adult education system.[25] Therefore, according to him, certificates and diplomas are often seen as undesirable because they limit the free flow of workers in both the labour market and the recurrent education system.[26] The implication of the first point for the Swedish apprenticeship system could be that Swedish workers do not see any real benefit in getting say, an electronics assembly apprenticeship, because all those doing such assembly work will get the same pay regardless of whether they have an apprenticeship certificate or not. This point seems reasonable enough in the context of a solidaristic pay policy which has its own in built socio-economic support network which contrasts sharply with an apprenticeship system. In the latter system, the skilled apprenticeship groups and their unions would support the pay and work differentials which arise from such a system and the certification which supports such a structure. However, the implication of his second point about terminal education as it affects the apprenticeship system may only be supported in those countries where an apprentice carpenter or fitter normally becomes a carpenter or fitter as say in England or Ireland. However, in some, at least, of the dual training countries, trainees do not necessarily enter the occupational field for which they have trained. In such places apprenticeship training is as much a basis

for retraining rather than simply a narrow craft specialism.[27] Thus a similar type of apprenticeship structure might indeed fit well into the recurrent education strategy of Sweden today.

In the context of the slight increase in the number of apprentices since 1974 in Sweden, an OECD report stated that although apprenticeship had virtually disappeared in Sweden its possible future role has been given fresh interest in recent times due to the employment situation.[28] What is meant by the latter is not altogether clear. Normally to refer to the 'employment situation' one is often really referring to the unemployment situation which however is still relatively low. Nevertheless we can take the reference to renewed interest as a type of straw in the wind. Will the Swedish apprenticeship have a second coming similar to the 1981 Norwegian one?

It is impossible to predict with any degree of certainty how the Swedes might or might not reconsider a new role for apprenticeship. However we can make some general points. First, Tuijnman's points above argue against such a change, second, the upper secondary school system and its evolution has entailed a deliberate process over the last 30 years or so of transferring initial training into the education system. Thus, the more successful this has been the less scope exists for developing a fully fledged dual system. This transference does not exclude school-work links. Indeed such links as we saw are relatively extensive especially in the vocational education segment of the integrated upper secondary school and include such things as work place visits and work experience. This is altogether different to the employer/employee relationship of an apprenticeship where the employee is sent by the firm back into the school system to get formal education. Where the complete dual structure operates within the firm itself, the apprentice only leaves the work area to be taught in the firm's approved training school.

Another reason for closing off this early age group to a developed apprenticeship system was the arrangement whereby Sweden transferred the responsibility for 16 to 17 year olds from the labour market authorities to the local school system without raising the age at which young people could leave school. This development arose partly because of the 1974 Employment Security Act which, among other things, prohibited the employment of under 18s in many jobs. In addition the increased female labour

market participation and the adjustment of young peoples wages to almost the same level as those of experienced workers were all factors which contributed to a decline in the numbers employed up to 18. Thus that group of 16 to 17 year olds who do not stay on in secondary school and who would often consider an apprenticeship or a labour market programme are now taken under the wing of the school system and are often involved in such things as external youth follow-up programmes.[29]

Thus the potential for any sizeable growth in apprenticeship seems rather limited in Sweden at least up to the age of 18. Those over 18, as we shall see, are also well served by the adult and tertiary education system complemented strongly by the labour market programmes and the in-firm training systems. If however there is to be a gap for any growth in apprenticeship it may indeed be in the post-18 group and this is hinted at in the above OECD report. This point is however very tentative since all it states is that if initial education for such a group is to be extended a mixed system may be more likely to increase participation.

Finally, before we leave our discussion of the Swedish apprenticeship, or more correctly, non-apprenticeship system, it may be useful to refer to an important, albeit for our purposes, limited study of the human resources/corporate strategy link in 12 financial institutions. Two are in Sweden and the rest in France, Germany, Japan and the US. In the Swedish insurance company and the bank, some of their staff are put through an apprenticeship. This lasted for one year in the bank and three years in the insurance company. However, common to all five countries, including Sweden, was a trend away from the old employment model whereby firms hired most of their workers at relatively low levels of educational attainment and then put them through apprenticeships. More and more firms were hiring workers at much higher levels of school attainment and are trying to refocus their firm based-training systems on skills which are primarily firm specific. In this process there is an unmistakable rise in hiring requirements and this reflects a desire to employ more recruits with broad based skills rather than specialised skills.[30] Although this study is very limited in its scope and sample - two Swedish firms and twelve altogether - and although it may overly concentrate on the particular type of job-specific rather than more broad based apprenticeship training system, it nevertheless adds to the

arguments against any future growth in Swedish apprenticeship.

Tertiary Education

Prior to World War II about 2,000 students were enrolled annually in Swedish universities. By 1960 this had increased to 8,000 and by 1968 it had risen to 30,000. This rapid and what was considered to be undirected growth caused a considerable amount of discussion in the 1960s. At that time students who met the entrance requirements for university courses, except some restricted areas such as medicine, could register. As a result it became necessary to review the efficiency of the tertiary education system and in 1968 the so-called U68 Commission was set up to prepare an overall strategy for post-secondary education in the 1970s. The Commission met over the following five years and then issued its report. After two years of debate and modification this was followed by a 1976 law which was amended and finally passed in 1977 some nine years after the process began.

1977 REFORM

The U68 Commission, and the 1977 legislation which followed it, provided the basis for a thorough reform of tertiary education in Sweden. In other countries such as the UK, Ireland or Norway there is a binary system at third level which includes both the university and non-university sectors. This had also been the case in Sweden prior to the 1977 reform where its universities were separate from other colleges in the post-secondary phase. Now all of the tertiary sector was to form one unified system under a National Board of Universities and Colleges (UHA). The UHA is a central government agency set up to supervise the higher education system. It is directly responsible to government and is headed by a board of governors with the Chancellor of the Swedish Universities and Colleges as chairman along with nine other members. The main function of the UHA is to plan and coordinate the higher education sector. This arises from the original aim of the 1977 legislation to unify the tertiary sectors administration and to plan it in terms of intake, provision and future developments.

Nearly all post secondary education was incorporated into higher education and, as such, was to be administered by

universities and colleges. Thus, a large number of short-term, highly vocational study programmes were included under the same system in the traditional university and college programmes. One major aspect of UHAs work was to submit annually a budget request for the funds required to pay for the teaching and research activities of the tertiary sector. These funds were placed at the disposal of the institutions of higher education and only in unusual circumstances did the government specify in detail how the funds should be allocated. From the 1993/94 fiscal year each third level institute will receive a single, comprehensive general grant. This will be fixed for three years at a time so as to further increase the independent long-term planning capacity of each higher education sector.

UHA works to the Ministry of Education and Cultural Affairs and has five planning committees working to it. In the original set up, the administration was decentralised into six regions around the existing universities, and regional boards were responsible for the coordination and planning of the resources. These boards were abolished in July 1988. It is to be noticed that the strong unitary process in Sweden can be contrasted with the equally strong regionalised system of Norway. The one major exception to the unitary set up in Sweden is in the agricultural area where the education programmes have been run under the aegis of the Ministry of Agriculture.

All of the tertiary education institutions in Sweden are central government agencies and their staff are civil servants. The one exception to state ownership is the Stockholm School of Economics which is run by a private foundation but even this receives substantial government funding. Students in Sweden pay no tuition fees and those who need help to finance their studies can get what is called post-secondary study assistance which includes both grants (about 29 per cent of total) and loans. This assistance is means-tested and may be reduced depending on the student's own income - no account is taken of the financial circumstances of parents or spouse. A student over 45 years cannot normally get assistance. Repayment of the loan begins no sooner than six months after the final receipt of study assistance and instalments are income related and incur a low rate of interest. Those who are in receipt of employment training grants need not have to make loan instalments. Moreover, such repayments can also be reduced

if income has declined substantially in relation to the original projections on which the repayments are based.

Following the 1977 changes the new collective name for higher education was hogskola. This encompassed not only the original six universities but also the various professional colleges and a number of programmes previously within the upper secondary school system. Originally 19 hogskolar were created - six of these were based on the original universities, four on university-type institutions and nine were new. Today there are 34 higher education institutions.

ENTRY

A key element of the U68 Commission was to bring a closer relationship between higher education and the labour market. The commission viewed post-secondary study as a recurrent process to be continued throughout a person's life. For this reason, the 1977 reform provided the basis of a system which effectively controlled admissions into the various courses. Here efforts were made to prevent the class bias which affected admissions to the tertiary sector. In order to reduce the over-representation of students from the higher socio-economic groups and at the same time move the tertiary system towards being part of the recurrent education process, a selection process operates in courses where the number of applicants exceeds the number of available places. Before we look at this selection system, it should be explained, that in order to be admitted to higher education, an applicant must fulfil what are called general admission requirements, common to all courses, of completing at least a two year programme at upper secondary or its equivalent. In addition applicants must meet the special admission requirements which may be required in particular courses or programmes.

In those cases where applicants exceed the available places for any course a selection is made from among the qualified applicants who are first divided into the following five categories:

(i) those with a two year upper secondary;
(ii) those with a three year upper secondary;
(iii) those who have completed the equivalent of upper secondary as in folk high school;

(iv) those with adequate age and work experience;
(v) those with a foreign education background.

In order to avoid giving an advantage to those with simply the highest academic results in upper secondary, each of the above five categories is allotted a number of places proportional to the number of applicants in that category. The final selection is then based on the results from upper secondary and its equivalent and, where relevant, on work experience. In addition, however, a certain proportion of applicants have to be taken from those who left upper secondary no more than three years ago. Thus according to Turner and Rawlings, Sweden following its 1977 reform took a bold step in attempting to break the link between academic achievement and entrance to higher education in order to try and apply the same philosophy to higher education that prevails in their comprehensive and upper secondary school system. However, in spite of the original intentions and the efforts since then to improve the socio-economic mix of entrants to higher education, the working class and other groups are still under-represented.[31] Thus, the objective of changing tertiary education from elite to mass education was not achieved. Wider admissions, however, have caused recurrent education to play a more important part in the higher education sector. This is evidenced by the increased numbers of people going into tertiary education after some years working - a topic we will return to shortly.

In 1991, a new set of rules for admission to tertiary education was introduced. These rules provide pupils with a double chance of admission to tertiary education. Here the applicant can get credit for both an upper secondary school leaving certificate and the university aptitude test. This test had been mostly used prior to then for older applicants who had not completed upper secondary. Now it can be used as an alternative to school results for all applicants. At least one-third of places in the general study programme but not more than two-thirds can be filled in either of these ways. The exact ratio of aptitude test to exam results is decided by the UHA for each of the 100 or so general programmes and is the same throughout the country. In regard to the local study programmes, the mix between the test and exam results is decided by the individual university or college. *Part of the reason for the 1991 admissions change was to avoid relying too much on school*

results as this was seen to cause some stress in upper secondary. Another reason was the belief that an individual's academic ability can change over time and may improve after upper secondary.

COURSE MIX

About 35 per cent of young people go into higher education after completing upper secondary and about 65 per cent of these take the three or four year study lines.[32] Swedish undergraduate education is organised into about 100 general study programmes each of which are set up by parliament. These study programmes were created in the universities in the late 1960s. Until then, students entering arts, social and natural sciences could choose which subjects they wanted in their degrees. Since 1969, however, students can enter study programmes which are geared to particular labour market needs.

These specialization or full-degree programmes are run over periods varying from one to five and a half years. Each programme consists of courses of different lengths and is designed to meet the needs of certain vocational sectors in the labour market. The 100 or so programmes can be classified into five vocational training sectors which are listed below along with the proportion of full-time equivalent students.

Table 4.3: Sectoral distribution in Sweden of tertiary level students-full time equivalents

Undergraduate studies and local study programmes for the following:	1984/85 %	1987/88 %
Administrative, economic and social work professions	20	23
Technical professions	15	19
Health professions	18	16
Teaching professions	18	13
Information, communication and cultural professions	4	4
Separate courses	26	25
Totals	124,700	130,400

Sources: ICE(1989, a, 20) and The Swedish Institute(1990,a)

As we can see above, the total numbers have increased strongly between 1984 and 1988 and the present numbers are over four times the 1968 enrolment reflecting strong growth over the last twenty years or so. The most recent growth areas on the basis of the above data are the administrative, economic, social work and technical professions with the other areas showing a decline in relative enrolments.

When parliament establishes a study programme, it specifies its major aims and length. The UHA then sets a general curriculum applicable throughout the country. The local curriculum is then set out by the programme committee at each institution which details its structure and content. Colleges can also establish local study programmes on their own initiatives. The role of these is to cater for the needs of different localities. In addition, an individual study programme may be set up if one or more students feel that the available courses in higher education do not suit their needs. Separate, single-subject courses established by a college may be part of an overall programme provided mainly as a form of recurrent education. Finally, the tertiary education sector provides what are called short-cycle technical-vocational studies. These are set up to provide post-secondary training in areas which are inadequately catered for. They deal mainly with technical topics and an applicant must have worked a number of years in the area with formal education qualifications being less relevant than actual experience.

An interesting aspect of Swedish tertiary education is the age distribution. The table below shows the large proportion of students who are over 35.

Table 4.4: Age distribution of students in undergraduate education

Age Group	Autumn 1985	Autumn 1988
	%	%
Through 24	42	45
25 - 34	35	32
35 +	23	23

Source: ICE (1989, a, 19) and the Swedish Institute

There has been no change in the proportion above 35 years between 1985 and 1988 but the younger age group has increased slightly at the expense of the middle group. This age structure has not always been the case. In the 1960s the ratios of first-time students aged over 25 was very small. This began to change at the end of the 1960s and the first half of the 1970s, partly as a result of the widening access to tertiary education. Also because of the admission system which, as we saw, confers additional credit for work experience. This however produced the unintended side effect of providing those with work experience extra credits for getting into attractive study programmes which in turn produced the side effect of creating waiting lists at the transition to higher education. As a result the admission system was revised in Autumn 1991.

OUTPUT OF TERTIARY EDUCATION

During the 1980s between 25-30,000 graduates finished universities and colleges. Along with this another 10,000 entered the labour force after acquiring partial higher education. During the 1970s the mix of long and short courses changed so that longer programmes came to account for a small share of the volume of education giving way to the shorter, highly vocational programmes. The 1980s saw changes in the relative volumes of different study programmes with those geared to the technical sector of the labour market increasing greatly this capacity. As we can see in the table below graduates from the technical and scientific grew by 42 per cent between 1981-85 and 1986-90 and are expected to grow by a further 78 per cent between 1986-90 and 1991-95. This is in sharp contrast to all the other sectors which either decline or remain static. Most of the growth in the technical area is due to the huge expansion of college engineers and the more modest growth of university engineers, scientists and other technical areas.

Table 4.5 Average no. of graduates from the Swedish tertiary education sector during 3 five-year periods.

Education Field	1981-85	1886-90	1991-92
Technical & Scientific	3,800	5,400	9,600(78 per cent)
Liberal & Social Sciences	8,600	8,200	8,800
Medical & Paramedical	7,000	6,800	7,400
Teacher education	9,200	7,000	7,400
Higher education, total	28,600	27,200	33,200

Source: OECD (1992,f, 154)

About 15 per cent of Sweden's labour force now hold degrees and this is expected to increase to over 20 per cent by the year 2,000. Although the number of graduates rose very quickly during the last 12 years or so employers are still indicating a shortage of qualified labour in many areas. Unemployment among graduates, remained as low as ever during the early 1980s recession while it rose steeply for upper secondary graduates and more steeply still for those without any post compulsory education. Graduates suffered mainly from having greater numbers start their careers further down the job hierarchy.

More than half of all graduates acquire, immediately after graduation, jobs with qualification requirements similar to their own. Breadth of education is an important factor as regards adjusting to variable labour market demand. For example, architects have suffered heavy unemployment during downturns. By contrast graduate engineers and scientists with a wider education capacity have suffered less unemployment during downturns. Social science, economics and law graduates have a much wider career target spectrum. These groups are highly interchangeable in the labour market, which reduces their adjustment problems.[33]

COMMENTARY

Swedish tertiary education is an example of a highly centralised government funded system. It is notable that the 1977 changes were an outgrowth of a concern for the lack of direction of the relatively unplanned tertiary sector. The reform can now be seen as part and parcel of the continuing series of changes to the Swedish education system which began in the 1950s. A major impetus for change in the tertiary sector was the apparent low student motivation in the 1960s reflected in a relatively high drop out rate from college. In addition the student unrest of the 1960s, the decline in the number of enrolments in higher education and a comparatively low level of interest in going to college or university all provided part of the background to the setting up of U68 and the consequent changes. It was also argued that the lack of general interest in third level education at the time was influenced by a significant amount of graduate unemployment. The match between tertiary education and the labour market in Sweden has

considerably improved since then and is now part of the planning process of the tertiary sector.

Thus the increased role of the state arose from a background of a growing realization that there was an inherent mismatch between Sweden's tertiary education sector and her society needs. Clancy makes a similar point in relation to the change process in Irish third level education which began somewhat earlier than Sweden with the establishment in 1960 of the Commission on Higher Education. He stated that the growing unitarianism in regard to third level education was achieved by a progressive process of state intervention.[34] Despite the fact that the Irish third level education system has been significantly influenced by the British tradition of higher education autonomy, the growth in government control in the last thirty years or so according to Clancy has been remarkable. However, the growth in government involvement in Sweden has been part of an education and society wide process which seems to have met with somewhat less resistance there. Nevertheless, despite the level of state involvement, Sweden's UHA does not normally direct the colleges or universities on how to spend their government funds leaving them with their own autonomy in this regard.

The unitary structure of this system as we saw earlier is in strong contrast to the Norwegian model. However a similarity between both systems is the relatively older age of third level students which reflects a greater number at third level with work experience. This late entry is positively encouraged in Sweden by the selection process which leaves one of the five selection categories to those who fulfil age and work experience requirements.

Adult Education

The Swedish system of adult education is a well developed one by international standards. In Sweden, as in Norway, it is relatively easier to form an overview of their system as their organizational superstructure is more centralised and therefore more visible to an outsider. This contrasts strongly with such countries as Switzerland and Japan where their more decentralised systems provide us with greater problems of identifying a structure for the country as a whole. We will first summarise briefly how the Swedish system has developed and then look at its operation today.

HISTORY

Today's adult education system in Sweden has its roots in the social and economic structures of the early part of the 19th century. Sweden has been free from foreign occupation since the Middle Ages, unlike her Norwegian neighbour who had her share of invaders including Sweden herself. She was at that time a relatively uniform country with a strong Protestant tradition. The early growth of adult learning was encouraged by protestant religious thinking and a liberal view of society. The first folk high school was set up in 1868 to provide the landed farming class with the education it needed to discharge its various public responsibilities. From the middle of the century and especially towards the end the main focus of adult education was in meeting the needs of the new urban working class. During this time workers set up study groups, taking the idea from Germany.

By the first part of the 20th century, adult education was provided by private non-profit making organizations. These had started as popular movements in the early part of the previous century but were given added impetus by the spread of industrialization and the related growth in urban communities. According to some, credit for much of Sweden's social and political progress has been attributed to them.[34] For example, the Swedish Temperance Movement was created to fight alcoholism which has been a major social problem. Also the first consumer co-ops date from 1850 and the national equivalent from 1899. In addition, a variety of other bodies were set up at that time including workers and union groups, farmers groups, political groups, etc. The strong growth of these movements was at least partly due to the fact that they saw knowledge as enabling their members to learn not only about the organization itself and its objectives but also about the social and economic problems of society at large. They thus became involved in adult education programmes aimed at training people for better membership and citizenship. In this way these movements became adult education associations and it was their success which led to a 1923 report on adult education. This report recommended increasing state support to certain areas of adult education but not a lot was done due to the economic difficulties at the time. Just after the war, in 1947, the Swedish parliament gave official recognition to voluntary adult education along with

increased financial support. As the amount of government support grew in the 1950s, 1960s and 1970s so did their level of operation. Since 1972, the National Board of Education has had a special adult education section. In order to receive state grants the associations must be open to the general public, there must be no indoctrination and courses must not be subject to public exam.

By the end of the sixties, the realization that adult education had mainly benefited the already well educated led the government in 1970 to carry out a major experiment within adult education. The committee on methods testing in adult education (FOVUK) was appointed in 1970 and its objective was to ensure, through flexible forms of study and incentives, that people with weak formal education who had not shown any interest in adult education would be encouraged to do so. The experiments were conducted in close co-operation with the Workers Educational Association (ABF) and the Salaried Employers Education Association. Today ABF, which belongs to the labour movement, is the largest of the eleven education associations which qualify for state grants and accounts for one third of all activities. The result of the experiments which ran over a five year period showed that a large proportion of actively recruited people with limited education could be encouraged to study, if recruitment is properly organised and if certain obstacles to study are eliminated. For example, study circles proved to be a suitable form of study for adults with limited education. In addition the trials showed that the study organisers should themselves belong to or have a background similar to the target group, therefore giving an advantage to organisers who are recruited from the popular movements. Where there was great pent up educational need but strong obstacles existed, the experiments indicated that the removal of these improves things - for example, adequate child-care arrangements for persons with small children, etc.[35]

These trials were an important part of the developments in adult education in the middle of the 1970s. However, other factors were at work also. First, the reforms which strengthened the lower-end of the educational system in the sixties and early seventies had their own impact on adult education because it threw into relief the gap between adults and young people. Second, it became clear that the academic courses in upper secondary and tertiary education were overburdened in comparison to the vocational programmes. Third,

the labour movement had been increasing their demands for adult education structures which would improve access for poorly educated and low skilled workers - something which the FOVUK committee spent considerable time on.[36]

There was also a strong belief at the time that the formal education system was not able to solve all the educational gaps in society and that adult education could help fill this gap by compensating for low levels of formal education in the adult population. The idea now began to take hold of the capacity of adult education to both fill in educational gaps in the formal area and occasionally to update a person's knowledge as the need arose - thus arrived the Swedish concept of recurrent education or adult recurrent education. Olof Palme, the then Minister of Education launched the idea of recurrent education at an OECD meeting of education ministers in Versailles in the late 1960s. The idea was subsequently taken up by the U68 Commission where it was seen as a means of diverting young people from going straight from school into university by providing opportunities for returning to education later in life. The concept was further developed by the OECD in 1973. Here the organizing principle for education is not based on the traditional 'front loaded' approach to learning whereby learning is based solely on a sequence within the formal education system from primary to secondary to tertiary. *Instead education is interpreted as a lifelong process whereby opportunities for organised learning should be made available throughout the individual's life.* Thus the provision of adult education was seen to take some of the pressure off the formal education system.

This early view of recurrent education was seen to have a role in the overall context of a developing economy. It was viewed as a means of both improving equality of education between the age groups and of helping unblock obstacles to restructuring a rapidly developing economy, particularly where new work methods and skills were called for. Hence adult education or recurrent education began to incorporate vocational factors into the original concept which had concentrated on the popular movement's interest in self-development. As we shall see the Swedish concept of adult education and its operating structures are not as broadly based as the Norwegian. Norway, as we saw, has an adult education structure that has from the mid-seventies incorporated vocational training with popular and other forms of adult education.

Adult Education Today

Adult education has a significant role in Sweden today. About half of Swedish adults take part in some form or other of adult education during the course of a year. This is, by international standards, a relatively high level and reflects both the highly developed structures supporting this learning and the great variety of courses available. In this section we will look at the different forms of adult education and how they operate but first we will identify their relative significance in the table below.

Table 4.6: Number of persons in various types of adult education

Study Circles (Adult) Education Associations)	In-firm training	Folk High School	Municipal Adult Educ (Komvux)	Higher Educ. for Adults	Manpower Training AMU Centres over 25 (Single Courses)	Basic Adul Education (Grundvux)	National Adult Education
1.5m	1.453m						
		*15,000					
		**237,000					
			219,000				
* Long Cources				70,000			
** Short Cources					44,000		
						20,000	20,000

Source : National Board of Education (1989)

We will now look at each of these types of adult education.

STUDY CIRCLES

According to the official definition a study circle consists of a number of people who meet as a group for the joint study of a given subject or subjects. The participants help each other with their learning and decide themselves how their work is to be organised. The circle leader has certain coordinating and administrative duties

but does not operate as a teacher in the normal sense of the word. There are no formal requirements for circle leader. In order to be eligible for a subsidy, a study circle must have at least five members and cannot have more than twenty. It must also meet on at least five occasions over a minimum of four weeks. The subsidy covers about 40 per cent of the costs, with the rest coming from school fees and municipal grants.

Study circles as a general type of learning go back a long way but in its present form it dates from 1902 when the first one is said to have been found in Lund. Bastide, the Frenchman, graphically described the study circle:

'There is not a village in Sweden which does not have every evening, at least one study circle. The members of these circles meet at home....about six o'clock, or else ...make their way to the town's pastry-cook's. In this country of semi-prohibition the pastry-cook's takes the place of the cafe, where one may listen to an incredible quantity of lectures. One is among friends...there may be a retired colonel, a housewife, a scholar, an employer, the station master and the lampman from the same station. People study in order not to be alone, but also in order to improve the lives of all and to understand each other better. Everything is studied : from the mandolin and ceramics to constitutional law and Elizabethan tragedy'.[37]

Although this is a rather quaint and dated view of study circles it gives a flavour of how they developed and the type of social mix involved. Study circles are run by the adult education associations and take their roots from the 19th century activity and growth of these movements. Why, however, does France or Ireland or for that matter England or Scotland not have such community based learning devices? This type of question is impossible to answer definitively. However, we can note some points of contrast that may help at least partly to explain this Scandinavian phenomena. In Sweden and Norway the study circles may have developed as a type of social response to climatic and geographic conditions although one would imagine that Scotland had similar, if not so severe, conditions. In Sweden one has not had the French cafe or the British and Irish pub tradition both of which facilitated social contact and network formation without any planned learning processes. In addition the funnelling of the energies of the popular movements into the education of its members gave the movements

a focus and provided the study circle with a significant support structure.

Study circles grew strongly in the early part of the 20th century and were significantly encouraged by the 1947 introduction of study circle grants. The table below shows the change in numbers over the years

Table 4.7: Study circles in Sweden

	1962-63	1968-69	1978-79*	1985-86	1987-88
No. of circles	101,000	155,241	200,000	290,000	312,000
No. of participants	1,018,000	1,598,147	2,000,000	2,500,000	2,640,000
Average no. per circle	10.1	10.3	10	8.6	8.5

Sources : OECD (1977, 272), OECD (1981, a, 115), ICE (1990, b, 13) and the Swedish Institute (1990)

*This data relates to the late 1970s - the source did not give the exact date.

A number of interesting points now arise. First, the number of study circles which were only about 50,000 in the mid-1950s have increased continuously since then to over six times that number by the end of the last decade. Second, the average number in each circle has fallen slightly in recent times - something which could possibly be expected to increase the individual's opportunity to participate more. Third, this steady growth is due to the increased penetration of the study circle in society rather than to any increase in population - the population of Sweden has increased by only one-fifth between 1950 and 1988.[38] If we take today's population of 8.5 million and its adult population (20 - 67 years of age) of about 5 million we can see the statistical significance of study circles. However, since many people belong to more than one circle, it has been calculated that about 28 per cent of adults attend a study circle every year. Almost 60 per cent of the participants are women and the age structure is relatively even with the largest participation rate in the 24-25 age group.[39] The study circles are organised and

sponsored by one of the eleven adult education associations referred to above and are distributed relatively evenly throughout the country. The associations also receive government grants which allows them to train special activation officers who visit people in their homes to try and recruit them for educational activities.

Table 4.8: Mix of subjects covered by study circles

	%
Art, music, drama	36
Social science / information	18
Languages	15
Behavioural science / humanities	9
Mathematics / sciences	7
Medicine, health care	3
Technology	3
Business economics	2
Other	7

Source : ICE (1990, b, 13)

The above table shows the strong emphasis in the non-career related topics - particularly on largest category of art, music and drama. It is of interest that the importance of this category along with languages goes back at least to the 1960s.[40] Study circles should provide important fruit for thought for those countries which wish to introduce mechanisms to improve the general education of their population at community level.

FOLK HIGH SCHOOLS

As we saw above the first folk high school was set up in 1868 and by the end of that century they were receiving state grants, which today is still their main source of finance. At present there are about 130 folk schools about half of which are run by popular movements such as the labour movement, religious groups, temperance society and so on. The rest are run by the local authorities.

Although the earlier folk schools were set up to provide young

rural adults with better educational opportunities, today they provide courses for people from all walks of life. Students must be at least 18 years of age and have completed compulsory schooling or its equivalent. Most participants are between 19 and 29 years of age and about six per cent of the students in any year take long-term courses with the rest taking short-term courses. The courses range from two days to over 30 weeks. In recent years there has been an increase in the shorter courses which the adult education associations, the trade unions and others organise together with the schools and these are often held at weekends. However, the long courses in music, art, environmental issues, etc. are also very popular. These longer courses attract almost double the number of women as men whereas the latter form two-thirds of the enrolment on the shorter courses.

Each school arranges its own curriculum within the framework of the Folk High School Code and sets its own qualifications. A significant feature of the schools is the strong element of student participation in educational planning and implementation. Folk high school teachers are trained for one year at the university of Linkoping prior to which the trainees must have a university degree and relevant practical experience.

MUNICIPAL ADULT EDUCATION

There are three types of municipal adult education in Sweden. First, Sarvux which became a county responsibility in 1988 and is for intellectually handicapped adults who are unable to participate in other forms of education. This type of adult education corresponds to that provided in special compulsory schools for intellectually handicapped children.

Second, Grundvux is for adults who lack basic skills in reading, writing and maths. This type of adult education became the responsibility of each municipality who must by law make it available in their area. The participants normally study 20 hours per week or less and received an hourly payment which helps to compensate for loss of earnings for those who take time off work. Alternatively, this payment provides a small incentive for those not employed. Approximately half of the participants are women. Originally, in 1977 when this type of adult education was set up it was intended for 'functionally illiterate' Swedes whose school level was appreciably weaker than that of the average compulsory school

pupil. Today roughly 60 per cent of the participants are immigrants and only 40 per cent are Swedes.[41]

Third, Komvux, which is numerically the most prominent type of municipal adult education and the longest established. It has approximately 310,000 participants in its six months course which is roughly thirteen times the number in the Grundvux or basic adult courses. This type of municipal adult education is of a general and vocational type and is provided in each of Sweden's 284 municipalities and also for certain educational areas (eg : the care sector) by the 23 county councils. Along with this there are two national schools for adults. These schools provide supplementary municipal adult education for those who are unable to study in their home areas due say to working shifts or geographical distance. The two schools provide a variety of learning options including distance learning and intensive short-cycle courses and are classified in Table 4.6 above as national adult education.

The municipal adult school system began operating in 1968. However, its introduction disturbed the voluntary associations in that, not only was it directed at a large section of the potential public of study circles, but its subject area covered a major part of the circles' work. In addition its objective was one that had already been central to that of the associations although the manpower authorities had already been providing courses aimed at particular adults with special labour market needs. The introduction of municipal adult education was part of Sweden's policy of raising the general level of formal education and was particularly aimed at reducing the educational gaps between adults and young people which had become more evident following the 1962 decision to raise the period of compulsory schooling from seven to nine years.

The new municipal adult courses which were set up in 1968 covered, at an appropriate level, subjects taught in the seventh to ninth year of compulsory and the tenth to twelfth year of upper secondary. The courses were run in ordinary schools mainly in the evening and were taught by teachers doing the same work with young people. The participants did not have to do the full curriculum at one go but could take one or more subjects at a time. The new municipal adult education system had been set up without the benefit of the pre-planning and testing which was used in the reworking of the ordinary school system and as a result there was a number of modifications to the system in the 1970s. Apart from the introduction of the 1975 Act on educational leave a special training course for teachers in municipal adult schools was opened at the Stockholm College of Education in 1971. In 1982, Komvux was

given its own curriculum and this established the municipal adult education system as separate and distinct from the ordinary school system. This curriculum is specially designed for adults yet all the courses and certificates are equivalent to the ordinary school ones.

Today this type of education is an important element of the Swedish education system. Although the municipal school system was originally built to improve the formal education of adults and thereby reduce the gap between youth and adults, it now incorporates other educational functions as well in that it provides a choice of courses ranging from short-cycle courses to post-secondary academic and advanced full-time vocational education courses. Thus it provides courses which are not available in the ordinary school system. These courses were set up to provide for educational needs which were not usually encountered in the youth education sector such as short courses in less common occupational areas. The formal adult education courses are run by separate adult education units in more than half of the 284 municipalities and in the rest it is the responsibility of the principal in the ordinary school sector. Many teachers today still divide their time between adult education and youth education.

Courses and exams are based on the modular system which allows a fair amount of learning flexibility to suit the needs of adults who may take it up to improve their basic education, to qualify for higher education or to improve their professional qualification. Over 60 per cent of participants are female and students normally take two courses at once. More than 30 per cent of students are also taking general subjects at upper secondary. In addition about a quarter are enrolled on vocational courses with the remainder taking lower level courses. In recent times efforts have been made to bring formal municipal adult education more closely in line with the needs of the labour market and utilise this type of adult education as an instrument of labour market policy. Special courses have also been introduced for the unemployed.

Municipal adult education authorities can sell courses to private firms and public authorities on a contract basis. This sort of education provides the individual with the opportunity of improving their formal qualifications within the framework of a firm's training policy. This type of contracted education provides about one fifth of the total provision of the municipal adult education sector and is expected to increase in the future.[42]

Municipal adult education in Sweden plays an interesting role in the overall adult education sector - interesting particularly in the context of the significant level of education and learning already

provided by the voluntary bodies through study circles. As we remarked earlier one can wonder why the Swedes went to the trouble of creating a municipal education system especially for adults when the extra work might have been done by the voluntary bodies. However, the 1968 development was essentially a follow on from the 1962 reform of the ordinary school system. In this respect municipal adult education was set up to reduce the formal education gap between adults and youths and is therefore to be seen as an integral part of the education system. If one is therefore thinking of a formal school curriculum for adults, one would have to admit that the obvious place for such courses would be in liaison with, the formal educational authorities with its uniform level and range of subjects. According to Titmus the essential difference between the Swedish municipal system of adult education and other country's programmes of a similar kind was that it reflected a determination to do everything it could, short of actual coercion, to ensure that everyone, whatever the age, had attained at least the basic level of schooling.[43] In recent years the municipal education authorities have moved into the non-formal education system and into company based education and are thereby following a trend that can be identified not just in Sweden but world wide.

HIGHER ADULT EDUCATION

By higher education for adults we mean single courses for adults above the age of 25. About a quarter of all upper secondary school leavers go straight into higher education while others prefer to leave this stage until they are older. Table 4.6 shows that 70,000 adults over 25 take single higher education courses indicating the impact this sector has on the adult education area. According to a CERI / OECD project, Sweden and the US are the two countries to have come furthest in making higher education available to large groups of the adult population.[44]

NOTES TO CHAPTER 4

1. Above data from Fest (1990)p.50, p.25 and OECD (1992,c)p.40.
2. See Jonzous (1989)p.17 and O'Connor et al (1978)p. XV.
3. Uhr (1977) quoted in O'Connor et al (1978)p. 26.
4. The following outline is based partially at least, on Standings (1988,a)p.3 and 4.
5. Quoted in Jonzon (1989)p.7; the Therborn reference is (1986)p.123.
6. See OECD (1989) in Jonzon (1989)p.9 and OECD (1963).
7. See Kennedy (1988)p.4 and Titmus (1981) passim.
8. Johannesson (1988) and Standing (1988,a and b) have been identified as the two more important academics to clarify these broad phases - Tuijnman (1989)p.1 and 2.
9. See Standing (1988,b)p.97, Abrahamsson (1988)p.42 and OECD (1991)p.2.
10. See Lundgren (1987)p.7.
11. See Turner and Rawlings (1982)p.3.
12. See Myberg (1987)p.25.
13. See Opper (1987)p.29
14. See ICE (1990,b)p.20 and Myberg (1987)p.14.
15. Turner and Rawlings (1982) are useful in this area.
16. See ICE (1990,b)p.7.
17. See Lundgren (1988)p.2.
18. See Opper (1989)p.140 and Lundgsen (1987)p.,3.
19. See Turner (1982)p.17.
20. See Opper (1989)p.141.
21. See Myberg (1987)p.31.
22. See ICE (1990)p.33.
23. Data taken from OECD (1979)p.25, Opper (1989)p.147 and OECD (1991) for Sweden's total civilian employment data.
24. See National Labour Market (1987).
25. See Tuijnman (1989)p.47.
26. See Bridgewood (1987)p.170.
27. See OECD (1985)p.33.
28. See Franklin and Blacklock (1987)p.29.
29. See Adamski and Grootings (1989). chapter 6 and Drobnic et al (1989) p.143.
30. See OECD (1988) p.72.
31. See Turner and Rawlings (1982) p.22 and ICE (1989,a)p.17.
32. See the Swedish Institute (1990,a).
33. Most of the material in this section is from OECD (1992,f).
34. See Clancy (1988)p.129.
35. See OECD (1981,a) for the details on the FOVUK trails.
36. See Tiujnman (1989)p.16.
37. L'Education en Europe:2 Scandinavie, Paris editions Ouvrieres. See Titmus (1981)p.95.
38. See Table 7 in the Nordic Council of Ministers (1989) Yearbook of Nordic Statistics 1988 and OECD (1990,Basic Statistics).
39. The above information is based on ICE (1990,b,14) and the Swedish Institute (1990,b).
40. See OECD (1997) Table 7.
41. See the Swedish Institute (1990,b). and Lundgren (1987)p. 3.
42. Above material and data are extracted from the Swedish Institute (1990,b).
43. See Titmus (1981)p.82.
44. See Abrahamsson (1989)p.25.

5 SWEDEN

Training

This chapter looks at the training of Swedish labour in the post-education phase. It considers two different though related areas. First, it deals with human resource training under the Ministry of Labour. Second, it looks at in-firm training.

Manpower Training

Matched against the volume of adult education in other areas in Table 4.6 above human resource training in AMU centres provides only a small element of the total block of adult learning in Sweden. Nevertheless it makes an important contribution to the operation of the Swedish labour market.

EVOLUTION

As we saw earlier in chapter 4 the evolution of labour market training can be divided into four phases. The first phase started in 1948 when the National Labour Market Board (AMS) was established and ran until 1961. In this early period the majority of participants were handicapped and refugees who were entitled to subsistence allowance. At the start of the 1950s, the AMS gave allowances to unemployed people who took part in vocational training courses. In the beginning its operations were small with on average 1,000 trained per year. During the economic recession in 1958, however, the level of training was increased considerably and AMS was now giving grants to unemployed people to study in the formal school system and in companies. Thus, up to 1958, labour market training might be classified as a type of vocational therapy

and it was the 1958 recession which prompted the increase in training expenditure.[1]

The second phase which ran from 1961 to 1969 saw overall labour market expenditure rise continuously but in a counter-cyclical way by rising more vigorously in recessionary years. An important aspect of this period was labour shortages which led to efforts to increase the labour supply. For example, in 1963 labour market training was expanded to include both those who were in danger of losing their jobs, together with employed workers who were being trained for areas where there were skill shortages. Also during this phase efforts were made to attract and assimilate foreign workers and to increase the female work force by attracting women, especially married women, into the labour force. The second half of this phase, from 1965 to 1970, saw more than a doubling of the average numbers on labour market training schemes due to a steady and continuous increase in numbers each year.

The third phase which ran from 1970 to 1982 saw roughly a 20 per cent increase in numbers trained, as we can see in Table 5.1 below. However, in the latter half of the seventies the number in training actually increased by over 80 per cent on the 1970 figures. This strong growth in training numbers was mainly to bridge what was expected to be only a temporary fall in labour demand.

Table 5.1: Average number of persons in training for labour market reasons by course arranger 1965 - 1982 (excl. in-firm courses)

Year	NBEs labour Market Training Courses %	Formal School System %	Other or no Information %	Total
1959	-	-	-	4,600
1965	68	27	5	13,203
1970	42	41	17	28,937
1975	55	38	7	27,524
1979	56	41	3	52,572
1982	73	25	1	35,100

Source : Based on Jademark (1985, 24)

Note: The above data is short one per cent in the first three columns - the total figure is correct.

The above table shows that although the school sector held around a quarter of the training volume in the mid-sixties and early eighties this is where much of the late seventies increase in training was accommodated. The level of in-plant training, as Table 5.2 below shows, had also varied considerably in volume and relative terms until it fell in 1982 to 1,100 or the equivalent of three per cent of the training total in the non-firm area. However, the most notable aspect of the data is the large variation in the number of workers who were trained instead of being let go. This varied from three per cent of training in other training areas in 1975 to around 80 per cent in 1977 and 1978.

Table 5.2: In-plant participants in labour market training

Year	Average no. of persons(training or otherwise laid off . excluded)	% of relevant total in other areas of labour market training	Total no. of persons training or otherwise laid off or redundant	% of relevant total in other areas of labour market training
1965	2,700	20	-	-
1969	4,000	13	-	-
1970	4,900	17	-	-
1975	7,800	28	3,100	3
1977	5,200	12	124,600	82
1978	3,300	6	126,000	80
1979	2,200	4	17,600	12
1982	1,100	3	11,700	11

Source : AMS (1985, 11)

During this third phase the government defined the aims of labour market training in a 1975 law. First, it could be used to stabilise the economy by increasing it when in recession and reducing it when the economy returns to growth. In addition, training could reduce the conflict between full employment and stable prices by expanding the labour supply to match the demand

when necessary. Second, labour market training aims to improve the equality between different groups and this would be seen most clearly in its training of unemployed labour. Such training according to the law is to be targeted also at other weak groups such as immigrants, occupationally handicapped and women entering the labour force. Finally, training is important as a means of promoting economic growth by ensuring that training matches the need of the market. One of the more important elements here is the role played by 'bottle-neck' training where certain sectors are finding it difficult to get skilled workers.

The fourth phase began in 1982 and reflected a desire to cut public expenditure in general and to make labour market policy and training more cost-effective. There was also an increased emphasis on helping companies by supply side measures such as training or retraining to avoid production bottle-necks. With the rise in youth unemployment, in Sweden as elsewhere, there was also a strong growth in youth schemes.

PRESSURE FOR CHANGE

A number of difficulties became evident with the labour market training system in the early to mid-1980s.[2] First, the intention that the volume of training would flexibly match the level of training demand was not adequately realised. This poor matching was most noticeable prior to the 1970s when there was a somewhat better matching. However, even during the recession of the early 1980s there was a fall in the number of trainees. This lack of matching is partly to be explained by the existence of a large number of training centres with their relatively fixed inputs of premises, staff and equipment. Second, the aim was that courses would be matched to the needs of the labour market. However, the training centres' courses were organised by three separate government departments.

(i) The National Labour Market Board coming under the Ministry of Labour had overall responsibility for the courses. It set out the aims, extent and location of courses. It also selected the participants as well as regulated the activities which took place at the central level. This tended to cause difficulties at the periphery in that the local office was bound by relatively detailed instructions from

headquarters. It was also responsible for the ancillary staff in the training centres and the services provided for the course participants such as medical care, accommodation and spare time activities.

(ii) The direction of activities at regional level was carried out by the Course Board which included representatives from AMS, the National Board of Education (SO) and representatives of the employers and employees. This was been set up to ensure that the training provided matched the needs of the market. Under it was a number of course committees, one for each occupational area. These committees assisted the board in the design and content of training. In general however, it was argued that the board and its committees failed to keep trainers informed about the needs of the labour market. In practice the decision on what manpower gaps needed to be filled by training was made centrally in spite of the fact that these gaps often tended to be more regionally specific.

(iii) SO was responsible for the administrative, educational and financial management of the courses and the training centres along with the buildings and equipment. It therefore looked after curriculum development, study plans, course evaluation, employment of training staff and the procurement of premises and equipment.

(iv) The National Social Insurance Board paid the course participants their allowance.

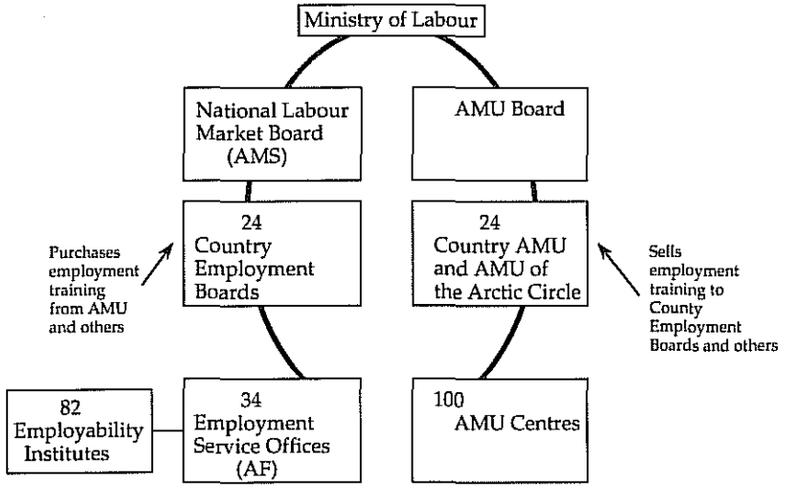
Thus the vocational training and the AMU centres in which it was held was the responsibility of SO and the Insurance Board paid the trainee allowance. AMS through its job centres decided who was eligible for training in what skills and where. This division of responsibility gave the educational role to the educational authorities and the control of the interface with the job market to the labour market authorities. The difficulty with this structure was that the decision making mechanism was rather cumbersome exacerbating even further the lack of flexibility referred to in the first point above. In addition excessive generosity was shown in training workers in seasonal trades and occupational areas where employment was declining rapidly. Training of such groups as the over forty-fives had also been considered inadequate. For these and

other reasons pressure for change had been building up and a new structure was introduced in January 1986.

1986 DEVELOPMENTS

To clarify the 1986 changes we will first outline the labour market administration structure as it operates today. The diagram below provides a simple map of this administration.

Diagram 2.3: Swedens labour market structure



The Swedish labour market administration today includes the National Labour Market Board (AMS) along with the 24 County Labour Market Boards. The county boards are regional agencies which look after the employment services and general labour market matters in their area. Many decisions which used to be made centrally by AMS are now delegated to these boards which in 1986/87 were, for the first time, allocated funds of their own for the purchase of training. They run the 82 employability institutes

(AMI) and the 340 employment offices (AF). AMI is responsible for vocational rehabilitation and intensified counselling for jobseekers with impaired or limited work capacity. Their overall goal is to help the job seeker enter the regular labour force. They also provide intensified counselling for those who are finding it difficult to decide on a job or career path. They thus provide the additional support that the employment offices cannot provide.

The employment offices, on the other hand, deal with job placement and Swedish law stipulates that all job vacancies (with certain exceptions) must be registered at an employment office and private job agencies are forbidden. Companies of course need not hire people referred to them by such offices. Each of the 284 municipalities has at least one AF office and all offices are linked to a computerised network that allows region-wide and nation-wide placement services. The offices are co-ordinated by the 24 county labour boards and at national level by the National Labour Market Board.

AMS is the central administrative agency and is directly in charge of both the county labour boards and the AF and AMI under these boards. In turn it is responsible to the Ministry of Labour and the Cabinet. AMS is allocated funds from the government budget for purchasing labour market training. It then allocates these funds to the county employment boards who then decide how best to spend them in accordance with their needs .

AMU

On 1st January 1986 the new Labour Training Group (AMU) was set up and took over the running of the 100 or so training centres. AMU is Sweden's largest provider of vocational education for adults. It inherited the previous National Board of Education's responsibility for organizing training courses and has been given the new role of selling training in competition with other providers. The AMU group consists of a central AMU board and 25 autonomous regional bodies. It is a state owned body and is classified as an assignment authority which means that its activities have to be self-financing since it receives no allocation from the government budget. The aim of AMU is to break even and if a surplus or deficit is generated the government will decide how best to spend or fund it. The AMU group consists of a central board and

25 autonomous regional bodies (one for each county plus a Nordic AMU based on an inter Nordic project). The central board is responsible for the development, planning and coordination of the resources in the AMU group. It also prepares central course syllabuses and is responsible for the overall financial position of the group. The board is led by a Director General with 30 staff divided into three operational areas: resource planning, educational development and personnel. The Board and the regional AMU units are organised on a tripartite basis. The Board has representatives of employers, unions, local government, AMS and the National Board of Education. In addition there are two members with experience of company management. The county AMU is led by a board made up of representatives from the employers, unions, county labour market board, county school board and two members with experience of company management. Each AMU centre is run by a training manager under whom is a number of training supervisors for the different training areas - eg. maritime technology, management training, computer science.

COUNTY LABOUR MARKET BOARDS

Each County Labour Market Board assesses the training needs in their area on the basis of information from the employment offices and elsewhere. Since training is meant to supplement rather than duplicate formal education, the training and education provided by the ordinary school system is also taken account of. Once the Board has decided, in consultation with the rest of the labour market organizations concerned, it finalises its training requirements and purchases this from a variety of providers including AMU, municipal adult education, upper secondary schools, higher education authorities or private firms. The choice of trainer is decided on the basis of price and quality but up to 70 per cent of it is bought from AMU.[3] An interesting point here is that even as early as 1986 the AMU courses were found increasingly to be in competition with the skills taught by municipal adult education schemes. Thus while the arrival of municipal adult education in the 1960s had raised the competitive hackles of the adult education associations, the former was now often in competition with AMU in the training area. According to Helmerius and Herder although most of the training is bought from the AMU group, purchases

from other sources such as municipal adult education and upper secondary schools are tending to increase while AMU's share falls back. This trend has been noticeable since the first year of the new system when 94 per cent of all purchased courses came from the AMU group.[4]

We will now look briefly at the concept of commissioned education which plays an important role in the post-1986 training system and which relates to the purchase by the County Labour Market Boards and others of training and education.

COMMISSIONED EDUCATION

The legal status of commissioned education is based on a 1985 Act and two 1986 regulations, one relating to municipal education and the other to upper secondary school. Commissioned education refers to a situation where an educational programme is organised for a particular client such as a County Labour Market Board or a private company in return for payment. The customised education being bought by the company or county board must be fully paid for and have no measure of state subsidy. The 1984 bill which led to the above Act refers to the type of education involved - ie. upper secondary school, Komvux adult education, municipal higher education, state-sponsored popular education (ie. folk high schools and adult education associations) and national schools for adults.

Two developments provided an impetus for this Act. The first was the movement which led to the 1986 AMU developments and second the 1984 creation of renewal funds whereby large firms put 10 per cent of their profits aside for education, etc. We deal with renewal funds later in the section on in-firm training. There are three types of commissioned education:

(i) That without any counterpart in the normal educational system. This type is very company specific education and refers for example to programmes focussing on particular work positions, machines operations, etc. in a particular company. The content of this type of education would be agreed between the client and the producer.

(ii) That which corresponds to some form of regular education. Here the commissioned course is equivalent to Komvux or upper secondary education and provides the recipient with a particular level of education and, depending on the course followed and exam taken, can give a particular qualification.

(iii) That which is mid-way between the above two and which is not directly corresponding to any type of regular education course but is essentially comparable to it.

The total volume of commissioned education is roughly 70,000 participants with the County Labour Boards being the biggest client taking 56 per cent of the product. Next come the national and local authorities with 34 per cent and finally private companies, at 10 per cent. The low level of purchases by the private sector is thought to be due to lack of tradition of buying the product from the public school system; secondly marketing in this area is felt to be weak. Sixty four per cent of the product was provided by permanent school staff and it was felt to have a revitalising effect on the schools as well as providing them with resources to buy extra materials including equipment.[5]

Commissioned education is now operating long enough for a view to be formulated on how it is developing. For example, its rapid growth in the higher education sector has led to some criticism of it. Some have argued, for example, that the basic education is weakened due to teachers and facilities being pre-empted by outsiders. Also they have objected to the possibility of buying admission to courses which ordinary students have to compete for. Others have pointed to the risk of education and research facilities being excessively committed to the growing body of commissioned work. They also see the danger of facilities being developed to suit the short-term needs of firms.[6] In spite of these comments this area has grown strongly over the years and looks set for further growth.

WORKFORCE TRAINING

During the 1980s and up to the early part of this decade, about 100,000 to 130,000 annually have received training through the manpower authorities corresponding to two to three per cent of the labour force. In 1991 approximately 120,000 received manpower training and 116,000 are estimated to participate in some kind of training and education inside the company. About 57 per cent of

the total trained in 1989 were in purchased courses and the remainder were divided equally between chartered places in the regular school system and in-firm training.[7]

As regards the balance of activities within the labour market administration the evidence shows that there has been a relatively strong move away from temporary employment measures for the unemployed. Recently there were less than 7,000 participants in such schemes a large drop from 80,000 in 1983. In contrast the present focus for the unemployed is concentrated on manpower training.[8]

All manpower trainees are recruited through the employment offices (AF). In order to help them make the best choice of training, counselling is made available. The counselling courses provide information on the various occupational areas so as to help people in their choice of training course. These courses have helped a wide variety of groups such as women choosing non-traditional job areas and those with weak educational backgrounds and inadequate labour market qualifications. Where the job seeker has considerable difficulties regarding course choice, etc, they are referred to an employability institute where more detailed individual counselling and group counselling is available.

The age structure of training participants differs somewhat from the general unemployed category. In the first year of operation of the new AMU system most trainees were between 20 and 44 years old with very few older than this. Trainees have less schooling than the average member of the labour force. Research showed that about 15 per cent of those enrolled in training had only six to eight years of compulsory schooling.

COURSES

The average duration of training was 17 weeks according to the most recent data.[10] However AMU courses can vary in length from one or two days up to a year or more and courses are organised so as to allow as much flexibility of entrance as possible. New participants are taken on in groups or singly and as far as possible successively throughout the year. Most of the training programmes are in the form of foundation courses for particular occupations. The training itself covers nearly all occupational areas and all education levels from preparatory training to advanced training at

post-secondary level. There are no formal admission requirements. In general, participants are given the opportunity of making up any gap in their theoretical qualifications relevant to their course area. The courses themselves are normally at upper secondary level. A complete course leads eventually to a complete occupational training and there are also shorter courses that supplement earlier occupational training. AMU centres also provide courses at basic school level in Swedish, maths and foreign languages for those with an education weakness in these areas. Otherwise, training on its own would most likely be inadequate in preparing these participants for a job.

Courses are provided on a modular basis so that training can be tailored for each participant. For this reason an individual plan of studies is designed in consultation with each trainee. As regards courses for the unemployed, manufacturing related courses dominate at 24 per cent of total participants, followed by the caring sector courses at 14 per cent and the white-collar area at 11 per cent of the total.[11]

There are central course syllabuses drawn up by the central AMU Board. However, the county AMU Board can vary the syllabus so as better to relate it to local needs. The ideas for new courses can be got from instructors' contact with firms, unions, conferences, etc. Another important source is the Course Boards. These are composed of social partner representatives, the local employment service, an AMU instructor and a trainee representative. The boards exist at a regional level for each major occupational field represented at a county AMU centre. For example, in the southern region of Blekinge there was a course board for office automation and computers, mechanics, motor mechanics, electronics, electricity, CAD/CAM and robotics. The boards, which can meet say four or five times a year, can consider suggestions for alterations to syllabuses based on local needs but the final decision rests with the county AMU Board. As regards the preparation of the central syllabuses the AMU Board cooperates with the central occupational boards which are tripartite bodies and which influence the development of courses both within the AMU and the regular education system.

The AMU centre in Ronneby in the southern Swedish region of Blekinge has been described by the central administration as a model centre and for this reason Geers decided to look at its

operation. A few interesting aspects of this centre's operation are briefly outlined below.[12]

The reorganisation of AMU in 1986 was not as difficult for the Ronneby training centre because they had already been experimenting in aspects of the new structure prior to it being introduced countrywide in 1986. At that time the AMU organisation in Blekinge supplied quiet a sizeable volume of management training courses which made it better known to the companies in the region. Following the 1986 changes it was able to capitalise on this link and succeeded in achieving a situation where 10 per cent of its sales were to private firms (almost double the national average).

After 1986 a marketing manager was employed at Blekinge AMU in order to coordinate contacts with industry for the AMU centres in the region. He administers all the contacts with industry including the course offers and contracts. He also organises industry visits to AMU centres and in turn visits firms to enquire about their skill needs. In addition he meets the AMU director of studies and his assistants to consider how to anticipate industry training needs. He also discusses market research with the training staff and tries to ensure that AMU is systematically represented at relevant exhibitions. Enterprise contact takes up about 50 per cent of his time.

Blekinge AMU, like the other regional AMUs, takes most of the major training related decisions itself. For example, it decides the courses it offers, the syllabuses it uses and such administrative details as staff numbers and the course price. In addition, the trainers themselves have budget responsibility which acts as a work incentive. In practice this means that if their investments and the courses they develop bring in funds they can reinvest them. Training staff not only provide training but they are also involved in selling courses and developing new ones. New personnel are trained for these additional tasks and the training is arranged at a regional level. Almost everyone has his or her own visiting card. Finally, as in certain other regional AMUs, the Blekinge manager was recruited from the industrial sector.

Commentary

As always it is extremely difficult to gauge objectively how effective

any country's manpower training system is, even one as evidently transparent as that of Sweden. In this section we will first make some general points which may help to assess the overall structures. Following this we will briefly consider the manpower training area from the perspective of implementation at local level.

The time elapsing between enrolment at the AF office and the commencement of training was 104 days in the mid-1980s. This has fallen to 68 days in more recent times. Research also shows that 84 per cent of those who start courses actually complete their training and six months after finishing their training 74 per cent were working in the open labour market. In addition 80 per cent of these people have in turn got work in the occupation for which they were trained. Of the 26 per cent who did not obtain employment, 16 per cent had in effect left the labour market due to family commitments, military service, etc.

AMU in recent years has tried to direct its training at occupational growth areas so as to help smooth the continual process of restructuring within the Swedish economy. The Swedish textile and clothing industry now employs only one third of its early 1970s labour force and her once strong shipbuilding sector has been dramatically cut back along with other sectors such as the steel and wood processing sectors. In the restructuring of the Swedish economy, AMU and AMI have both played important roles. A Council of Europe study looked at the example of the role played by these two bodies in the closure of the Landskrona shipyard in 1981 with 3,000 staff in a small town of only 36,000 people. Two-thirds of the workers were found to need vocational training which had to be provided effectively and speedily as part of an overall project aimed at reducing the job impact of the closure. Two years after the closure only 7 per cent were unemployed whereas 60 per cent were in new jobs and seven per cent were in labour market training. From a more general perspective recent data shows that almost half of those who begin employment training change their area of occupation and many of the others change occupations within the same occupational area.[13]

The 1986 move which split AMU from the national organisation has injected a sense of enterprise into the activities of training centres. At local level a certain tension has developed between the centres as trainers and the employment offices as buyers. These AF offices for the most part set the training agenda which by any

standard is strongly focussed on the needs of the unemployed.

Certain difficulties have arisen in this system. According to some there is inadequate collaboration between AMU and Komvux resulting in possible duplication.[14] There are also possible institutional impediments which weakened the resolve to share resources and coordinate activities. AMU works to the labour and Komvux to the education ministry and this fact provides them both with slightly different perspectives and may leave them with the organisational residue of inter ministry rivalry at worst or inadequate consultation at best. In addition AMU could possibly better coordinate its activities with the upper secondary vocational school system. Another possible problem will be the growing numbers of middle-aged and older people having to be retrained as the labour force expands in these areas and as new technology needs to be more effectively absorbed.

LOCAL LEVEL

As regards an assessment of the Swedish system on the ground, O'Toole's study provides us with a useful insight on the implementation of labour market training.[15] His article reviews four different cases of local implementation - two more successful and two less successful cases (one of each type in Sweden and Germany). He first compares the overall administrative context of labour market training in both countries and then reviews the four individual cases.

By implementation he means the conversion of policy intention into action. This contains two components. First, getting those who are to carry out the mandate to execute it in accordance with dictates. Second, ensuring that the effects of these actions on the ultimate target are the ones intended. O'Toole's article deals only with the first aspect. He states that the general implementation of various tasks is assigned to particular organisations for execution and often any one job requires several such organisations to cooperate. This cooperation is often necessary because many tasks would be impossible to complete through a single administrative unit. Such cooperation tends to be improved as the bodies concerned deal with each other over a longer period of time and on a greater number of tasks. It can also be assisted by having effective coordinators who communicate and deal with the other relevant

bodies.

After comparing both the Swedish and German training and placement programmes he argues that the Swedish framework provides more fertile ground for success. In particular the AMU national training network, with its flexible structures within a stable organisational framework, provides a very effective manpower training structure. However, there were noticeable variations in the effectiveness of the two cases within each country indicating that the national policy structures did not completely determine events. Regional factors also had an impact on the outcome. We now briefly outline some of the common traits in the more and less successful regions in both countries.

SUCCESSFUL REGIONS

There were two noticeable factors at work in both of the successful regions. First, the more successful Swedish region had a variety of organisations involved in labour market training including the local AMS's units, the AMU centres, the schools and local government, the firms, unions, some social agencies and the various organisation committees and advisory bodies. The most striking characteristic exhibited by this diverse group was the extraordinary degree of common purpose which it shared. *All had one single and dominant agenda – employment – and virtually all the major parties trusted the others on this issue.*

The more successful German region had experienced high unemployment since the mid-1960s Ruhr coal crisis making unemployment the dominant concern of most of the various training parties - save for the firms, the region's Chamber of Commerce and Industry and some of the training centres. Although the Swedish region's employment agenda was more widely accepted than the German one, the latter's employment focus was still relatively powerful.

Second, a well placed individual acted as a facilitator of exchange and cooperation between the various organisations in the Swedish area. He helped to reduce inter-organisational complexity and the difficulties related to inter-organisational activities. The facilitator provided a number of services. He established and maintained the necessary inter-organisational communications or network of contacts. He channelled some of this into agreements and

coordinated the regional units into a coalition so as to act as a countervailing power against some of the constraints imposed by the national headquarters or government. Finally, he made bargains between the various groups explicit so as to help develop and strengthen the level of cooperation between them. The more successful German region had a similar type of individual who also believed strongly in the employment objective and was located at a communication nexus in the region's Federal Institute of Labour bureaucracy. In both successful regions the facilitator had a union background.

LESS SUCCESSFUL REGIONS

The less successful Swedish region had no single focus or agenda probably because there had been no long history of high unemployment. Also the general politics of the area was conservative. Even the unions were divided on various issues and the AMS officials performed their duties correctly but without great enthusiasm. In addition the regional units had failed to develop a local countervailing structure to the national authorities thus weakening the region's ability to negotiate in a more coordinated way. There was no facilitator worth speaking about in the region. The equivalent person to the one in the more successful region simply gathered the requirements from the various bodies and passed these requests on. He was very clear about the formal procedures and was an effective compiler of information but was uncertain about what routes to take to produce agreements.

In the less successful German region, unemployment was quite high yet there was no agreement that manpower training was in everyone's interest and in fact little labour market training had occurred. The Chamber of Commerce and Industry dominated training in the area and most of the courses were geared towards certification and advancement rather than the reduction of unemployment. The trainers aimed to sell courses successfully and certify trainees, the firms wanted highly trained staff and most of the trainees were already working and were training as a way of getting on in the job. Even the local unit of the Federal Institute of Labour was party to this system and although there was high unemployment, the system skimmed the most upwardly mobile employed into training. In addition, the training courses started in

October or April which did not always fit the needs of the unemployed. Finally, there was no facilitator in the system.

The above points indicate that although national programmes have a considerable impact on the success or otherwise of an area's training structures, regional factors also play a part. This is especially so in a more market orientated structure such as Germany where the training system is less state controlled than in Sweden. However, even in a more state organised structure such as Sweden, regional factors have a bearing on improving or reducing the effectiveness of a region's training system. The two critical factors here, according to O'Toole, were the focus and common resolve which a single agenda provides and the catalytic and coordinating role of the facilitator.

In-Firm Training

In-firm training plays an important role in Sweden's ability to compete in the world. However, her company training structures are somewhat different than for example, Japan's. In particular the Swedish state training supports to firms are more centralised and less disparate than the Japanese. In addition, the origins of company training vary noticeably between the two countries with the Japanese system originally being more visibly affected by external factors and by war time experiences. Although Sweden is a small economy, with a relatively small population, it has a surprising number of large private firms who operate globally. Volvo and Saab-Scania are well known but somewhat small scale car producers. However, in heavy truck production Volvo is the second and Scania the fourth biggest producers in the world.[16] Other established multinationals include ASEA, Alfa-Laval, Atlas Copco, Electrolux, Ericsson, SKF and Stora. Later on firms such as Astra, IKEA and Tetra-Pak have followed. In this section we will first look briefly at the evolution of in-firm training in Sweden.

EVOLUTION

Throughout the period following the second World War companies had repeatedly been faced with skill shortages in certain areas which often arose due to rapid structural change. When such shortages occurred firms were forced to develop their own training

system partly because of the manpower and education sectors inability to respond and also because some, at least, of the training was firm specific.

As we saw earlier the state's involvement in training began in 1948 but it was restricted in the early period to dealing mainly with the training problems associated with recession and frictional unemployment rather than company training. The main concerns in the 1960s were in developments related to the primary and secondary education sectors and in the 1970s the focus shifted to reforms in the higher education area. The developments in the latter sector focussed on the notion of recurrent education and the relevance of work experience and overall experience of life. However, in the mid-1970s legislation began to arrive which had a greater bearing on company training structures.

The 1974 Educational Leave Act came into effect in January 1975 and gives all employees in both the public and private sector the right to get leave of absence from work in order to pursue their studies. Apart from the exclusion of self study there are no restrictions on the nature and direction of these studies. Employees can return to their job in the company or if this is not possible to another job with similar status and pay. The Act does not require the employer to fund in any way the employee during the absence period but the latter may apply for support from the various state training grants. In this regard there are a variety of arrangements for financing or subsidising the cost of adult education including compensation for income foregone due to participation in further education and training. For example, since 1976, employers are obliged to put aside a relatively small payroll tax to subsidise the cost of educational activities organised by the voluntary adult education associations, trade unions and folk schools. Of more direct bearing on in-firm training is the 1974 Security of Employment Act which describes and limits the circumstances under which employers can dismiss staff. In regard to training, the Act states that firms are first obliged to investigate the option of training people for other jobs within the company. According to research done by Statistics Sweden, there was a rapid increase in the number of staff receiving company training following this Act.[17]

The 1976 Co-determination Act requires employers to allow trade union representatives with adequate time off from their regular jobs to receive training so as to provide the knowledge

necessary for establishing industrial democracy in the firm. Public funds are available for this type of training but there must first be a union employer agreement before such a training programme can be implemented under the legislation. In addition to this the rules for negotiations set out in the Act give unions the right to discuss with employers the scope, orientation and spread of personnel training among the different employee categories. In addition, the 1977 Work Environment Act, which aims to achieve a safe and healthy work place, also takes account of the psychological aspects of the work place. This act requires that firms must ensure that staff have a good knowledge of their working conditions. In this context it could be inferred that employers are obliged to see to it that new recruits are given a thorough job induction and in particular should ensure that they have the necessary knowledge to avoid accidents.

The 1980s saw an even greater involvement of the legislature in the company training area. Two interesting pieces of legislation affecting in-firm training were instituted in 1984. *Firstly, the Employment Maintenance Training Subsidy provides subsidies to firms for in-service training programmes aimed at preserving and creating employment.* This is targeted at training which, among other things, helps to avoid redundancy, avoids or reduces the impact on the production flow which is caused by a companies skill deficiency, helps improve the skills of those employees with inadequate education and skills and improves equality between the sexes in the work place. The legislation stipulates that the subsidies can only be provided if firms guarantee work for those trained under the scheme. The County Labour Market Boards evaluate the applications and part of their remit is to give priority in their allocation of funds to improving the skill and education levels of those with a low level of formal schooling. Along with the above, the Employment Security Council also provides finance for training workers who are in danger of redundancy due to rationalization.

Following a period of rising corporate profits in the early 1980's and the general acceptance of the opinion that there was a shortage of suitably skilled workers for the new growth areas, the idea arose of creating funds within firms for the purpose of improving the quality of the workforce. An additional attraction for setting up these funds was the then government's concern with keeping inflationary pressures down. Real wages had fallen at that time and the strong growth in company profits made it difficult to convince

employees to restrain their wage demands. The renewal funds idea provided government with a mechanism to give employees a share in company profits without inflationary pressures. Thus, as a direct result of the central negotiations between employers and employees in 1984, the Act on Payment into a Renewal Account was introduced. The Act stated that all firms in 1985 with profits of half a million Kroner or more had to place 10 per cent into a special fund held in an account registered with the National Bank of Sweden. It did not define the type of training concerned but it was indicated that the employers and employees in each firm should reach a collective agreement on two issues. First, both sides should agree on the relative levels to be provided for research on the one hand and education on the other. Second, agreement should be reached on the actual education and training programmes. An important aspect of the arrangement was that the funds were not to be used for existing projects or personnel training programmes. Also, to encourage local agreement the renewal funds could be tied up for five years if an agreement was not reached on their use. The memorandum to the renewal funds Bill assumed that priority would be given in the design of educational programmes to groups of workers with a low level of schooling. This seems a rather weak level of direction and one would assume that some stronger incentive would be necessary to ensure the normal negotiated outcome at firm level would have this effect.

Some reservations were noted. First, in the beginning there were some difficulties with its operation and there was a distinct fear that the thing would be stillborn. In addition some were originally sceptical as to its future since, up to 1987, its role was minimal. However, research shows that about one-fifth of all employees in Sweden work in firms with resources in a renewal fund. Industries which pay relatively high wage levels tend to dominate in contrast to those with low wage levels. In addition, this research shows that areas with a substantial share of technical and administrative personnel and a relatively small work-force directly involved in the manufacturing process are more likely to have renewal funds. In contrast those sectors with a larger blue-collar work force are less likely to have a fund or to have a proportionally smaller fund.[18] The largest and more profitable firms were quicker in negotiating suitable terms with the unions. According to other research, one in ten companies had renewal

funds and 80 per cent of the value of the funds were located within large or medium sized companies.[19]

It is generally the view of the labour movement that this Act did not meet their expectations although it has stimulated the growth and organisation of induction courses in companies. In addition, it is calculated that the funds contributed only four per cent extra to the total volume of company training over the five year period. Thus the funds can only be viewed as a supplement to the large volume of training already in place. Notwithstanding this fact, *the Swedish renewal funds experiment will provide much food for thought for OECD governments looking for revenue efficient training incentives particularly in a period when wage restraint is necessary while profits are buoyant.*

The 1984 renewal funds development was followed by other developments which also affected company training. First, AMU as we saw was set apart from the Labour Market Board in 1986 and required to sell its training services. Although most of its training is still bought by the labour market administration, its changed status places more pressure on it to sell its training to the company sector. Second, the 1985 and 1986 legislation on commissioned education opens up the education sector to company training and educational purchases. Although the early signs indicated that many companies were somewhat reticent to use this facility, it has become, as we saw, a growth area, especially in the higher education area.

In 1990 extra government training incentives were made available for company training schemes that:

- help staff adjust to changes in technology or work organization
- help train new recruits in manufacturing industry, health-care, clothing or textile industries.
- help newly employed refugees or immigrants.

The above workers continue to get their normal pay and the state covers the training costs up to a certain maximum figure.

Twenty years ago, the study circles and other adult education bodies played a more important role than employers. By 1980 enrolment volume in all areas of learning had slowed except for company training which underwent a sizeable growth. By 1987 participation in in-company training had grown to such an extent that it surpassed the volume of enrolment in all other areas of adult education including the traditionally important area of study circles, which now took second place. Today employers are the main mandators of education among employed people.[20]

Company Training

Here we look at a Volvo purchase of AMU training, then we will consider how collective agreements impact on training. First, however, we should refer to Eliasson et al who found that training costs in Sweden amounted to 5.2 per cent of labour costs in the larger manufacturing industries.[21] In contrast one would expect a relatively smaller level of resources to be devoted to training in smaller firms.

Thellman in a paper for the OECD outlines how companies buy in AMU training.[22] One of the cases she documents is where Volvo commissioned AMU to provide a broad based general upskilling training programme for about 500 staff in three different sections of the company. The target group for the programme were workers with low levels of education. A certain amount of preparatory work was done in collaboration with Volvo personnel to ensure the workers' support and enthusiasm. The staff and union organisation was also briefed and use was made of an in–house video. The training programme contained 40 to 80 lessons covering such topics as:

- basic computer operations. Here certain parts of the training such as the software were later used in work eg. store management;
- technical or commercial English depending on the trainee needs;
- Swedish which concentrated on written or reading tasks depending on the trainees weaknesses;

- maths which concentrated on the technical or commercial area depending on trainee needs.

In deciding the exact details of each course, account was taken of the company's plans for each group of workers and the employees' skills along with individual employee performances. The actual teaching groups were mostly recruited with reference to the job area - one group was, for example, provided on a part-time sandwich basis where the trainees attended classes for a set number of hours per week. All instruction occurred during working hours and was provided so as to synchronise with production needs including shift times. Thus for some staff the training occupied two half-days per week while for others it was between four and eight hours per week. When reviewing the course afterwards it was noticed that it had been quite successful with those who had a weak formal education - the programmes target group. Also all of the participants completed the course which is an interesting result when we see that 81 per cent is the completion rate for the traditional AMU centre training programme.

Nilsson did a study on the costs of human resource development in Volvo. His work did not however calculate the cost of on-the-job training, something which would be very difficult to quantify.[23] One of the findings was that Volvo spent half of its human resource expenditure on introduction to the workplace. The average cost of Volvo training and education was equivalent to 17.8 per cent of total salary costs. In addition the time spent on educational activities ranged between six per cent and eight per cent of total work in the manufacturing industries owned by the Volvo holding company. In the technology and information – intensive Volvo companies around 14 per cent of work time was devoted to education. Naturally one would expect a highly developed company such as Volvo to devote at least a reasonable level of resources to training.

COLLECTIVE AGREEMENTS AND TRAINING

There are three national employee groups in Sweden: the Swedish Trade Union Confederation (LO) for manual workers with about 90 per cent unionization; the Central Organisation of Salaried Employees (TCO) for white-collar staff and the Confederation of

Professional Associations (SACO/SR) for graduate level white-collar workers. Overall the level of unionization is about 80 per cent which by international standards is high.[24] The level of organization on the union side is matched by that on the employers' side since most firms are affiliated to an employers' organization. The Swedish Employers' Confederation organizes private firms from 35 different trade areas. In addition the state is represented in industrial negotiations as an employer by the National Agency for Government Employers (SAV) with other units in the public sector being likewise represented.

The industrial relations system in Sweden is regulated by both a sizeable body of legislation and by a variety of agreements. As we saw earlier, the 1976 Co-Determination Act and others provides the social partners with a legislative basis to operate on. In regard to the training policy of companies, collective agreements covering various sectors have been made between the social partners. For example, the SAF-LO-PTK agreement states that the company must provide training for the new work which new technology involves.[25] In addition it stipulates that this training must be given to the people who carried out the jobs originally. However, despite such sectoral agreements, negotiations at the company level are still decisive since the agreements at sectoral level often only concern the general principles and rules which must then be specified at the individual firm level.

During the last seven years a number of collective agreements containing training and education provisions have been made in the public sector. One cannot be completely sure why such training provisions exist. It is possibly because the public sector unions are relatively powerful. However, it may also be because the public sector's labour market represents in some respects a single internal labour market. Therefore, because the level of labour retention is quite high, public sector employers may regard training expenditures as a safe investment on which a long term perspective can be taken.

RECENT DEVELOPMENTS

There has been a consistent increase in interest in in-firm training in Sweden especially since the early 1980s. This is due to a number of reasons. First, because the general education needs have been

reasonably well satisfied, initially, by the primary and secondary education reforms of the 1960s and then by the tertiary reforms of the latter half of the 1970s. Second, because of the growing acceptance of the importance of skills for international competitiveness and also because of the increasing difficulty with labour shortages. Third, because of the increasing size of companies in certain sectors at least. Thus for these reasons the internal labour market in Sweden has become physically larger, due to larger company size, and its visibility has increased as related factors such as the competitiveness and skill link have become more obvious.

Take one example here, the Swedish car industry. In the 1970s the Kalmar subsidiary of Volvo was the first plant to experiment with new organisational structures. The interest this factory elicited stemmed from the general concern with absenteeism and other personnel problems which sociologists and others identified under concepts such as worker alienation. However, following the two oil crises and the related employment difficulties, the traditional organisational factory structure reasserted itself in Volvo as elsewhere and factory designs geared to increasing worker motivation moved off centre stage. In recent years, with the increasing concern for labour and skill shortages in Sweden, both Volvo and Saab have begun to move again towards new factory designs. For example, Volvo's new Uddevalla plant is subdivided into a number of sub-plants rather than being one factory with one long production line. Each plant consists of a number of teams, each of which builds almost a complete car. This type of plant requires, according to Berggren, a new model of learning and training and is a production concept based on skill development. Another example is the Volvo LB plant in Gothenburg. Here workers operate on a group basis and groups are responsible for all tasks including training. In addition job rotation occurs within the groups. Thus, within Volvo and Saab, production structures are being increasingly built around in-firm skill improvement mechanisms. However, in the Volvo plants in Belgium, Holland and Brazil, where there is high unemployment, the lack of recruitment and labour turnover problems has resulted in little pressure for reforming the factory organisational structures.[26]

The main impact, for our purpose, of the strengthening of Sweden's internal labour markets, both in the public and private

sectors, are the increased incentive this gives to employers to allocate resources to improving the quality of the firm's human capital. However, some have argued that such an internalization of the labour market may weaken the bargaining power of the national or sectoral union bodies to the advantage of the local trade union unit. This seems to be partly borne out in Japan where the labour market is relatively more internalised than Sweden's and where the company union is considerably more powerful than the national or sectoral units. Going back to the LB Volvo plant, it is interesting that the local union is much more concerned than in the conventional Volvo plants with issues relating to work organisation such as education, etc.

Sweden, however, has her own problems in the company training area. One of the main difficulties is that research indicates that the level of participation and duration in company training varies noticeably by educational background. In addition these differences tend to become larger in longer training programmes. Research done on SCB data indicate that a high degree of inequality exists in the extent to which less educated workers were provided with the chance to participate in training programmes that lasted for three days or more.[27]

Conclusion

Sweden is an interesting example of an economy which has had an increasing volume of company training due partly to the following reasons. First, the state training structures in AMU have become more company user friendly. Second, the regearing of the education sector with the development of the commissioning structures. This latter development might be closely watched for lessons by other OECD countries. Third, a greater realisation of the importance of concentrating on skill upgrading as a means of strengthening company ability to compete. The Swedish Employers' Confederation makes this point by advising that learning must become embedded in the organisation so as to improve a firm's ability to change. Finally, the increasing internalization of the labour market further encourages company human resource investments.

NOTES TO CHAPTER 5

1. See Jademark (1985)p.23 and Standing (1988)p.99.
2. Some of the following difficulties are covered in more detail by Jademark (1985) Standing (1988,b) and AMS (1985).
3. See Corcoran (1991)p.30.
4. See Helmerius and Herder (1990)p.3 and Swedish National Labour Market Board (1987)p.13.
5. See National Board of Education (1990)p.5.
6. See OECD (1991,d)p.8, 9 and 12.
7. See Ministry of Industry, Labour and Swedish Institute (1991)p.23 and Helmerius and Herder (1990)p.6.
8. See Corcoran (1991)p.31.
9. See National Labour Market Board (1987), and the Swedish Institute (1990,b).
10. See Ministry of Industry, Labour and Swedish Institute (1991,25).
11. Data based on Helmerius and Herder (1990)p.6. This data relates to the proportion of total training at 128,400 in the same source.
12. See Geers (1989) for further information on Ronneby.
13. Reference to the above research results were made in the Swedish Institute (1990,b) and Helmerius and Herder (1990)p.7-8. The Council of Europe study above was 1985 Vol. II p. 43-55.
14. See Geers (1989)p.7-9.
15. See O'Toole (1983).
16. See Berggren (1989)p.174
17. Referred to in Tuijnman (1989,a)p.58.
18. See Eriksson, A.H. and A. Nilsson (1989), Renewal Funds Implementation Evaluation Distribution. A Swedish Experiment of Competitive Policy, quoted in Tuijnman (1989,a)p.63-64 and Standing (1988)p.144.
19. Referred too in Abrahamsson et al (1990)p.76.
20. See Statistics Sweden referred to in Tuijnman (1989,b)p.57 and 58 and OECD (1991,d)p.6.
21. See Tuijnman (1989,a)p.44. This data related to 1982 and would by now be expected to have increased.
22. See Thellman (1989).
23. See Nilsson (1987) referred to in Tuijnman (1989,a)p.43.
24. See Edlund and Nystrom (1988)p.18.
25. See LO (1989)p.30 and 31.
26. See Berggren (1989)p.188 and 189.
27. SCB refers to statistics Sweden data. See Tuijnman (1989,b)p.58 and 59.
28. See SAF (1990)p.14

6 JAPAN

Background and education

Japan has the second largest population in the OECD after the US and, along with Belgium, has the highest population density after the Netherlands. It is a very wealthy economy with a GDP per capita second only to Switzerland. The interesting thing here is that Japan in 1913 produced real product per capita which was only 29 per cent of the Britain's and was second from the bottom of the present OECD group excluding Iceland, Luxembourg and Turkey.[1] Japan was also poorer at that time than the Soviet Union and Romania. To indicate the limits of international comparisons of GDP data however, we should note that more qualitative information such as quality of the environment, living and leisure space, recreation time, etc., might show a somewhat different picture in comparisons between Japan and the rest of the world.[2]

As with other rich OECD countries it has a relatively large proportion of the labour force in the service sector but not as large as Norway or Sweden with their relatively larger public sectors. In common with Austria and in contrast to the Britain and US, where employment in agriculture accounts for less than three per cent of the work force, in Japan agriculture employs about eight per cent of the labour force.

Within the OECD Japan is the polar opposite of Sweden in having the smallest public sector. While its rivals for the smallest public sector, the US and Greece, have data in the reference to Table 6.1 below that for the current government receipts to GDP ratio, Japan has both significantly smaller current government expenditure on goods and services and current disbursements to GDP ratios. However, one should not be misled by simple statistics on public sector size to conclude that Japan like other large private sector economies is significantly dominated by unfettered market

forces. Japan, despite its relatively low public sector, is not the simple competitive market economy of the neo-classical world nor is it the non-competitive economy which Joan Robinson and E.H. Chamberlain worried about. Japan may yet provide one of the great case studies for unlocking the rather limited market non-market dichotomy of economics. Despite having a relatively low level of public sector expenditure to GDP it still succeeds in having a reasonable level of government involvement in the economy. Although this is not the place to develop this point it is worth mentioning that the level of management of the economy by the government is not always adequately measured by the level of public sector expenditure. Such things as subtle pressure, encouragement and minimal incentives from government may be a quite powerful form of non monetary state intervention. Apart from the government's intervention certain areas within the industrial and services sector are also strongly influenced by the operation of zaibatsu or conglomerates as we will see later.

The opening up of the realities of the Japanese economy to Western economists may not however weaken the latters attachment to the distinction between market, non-market and cultural factors - the latter concept being a shorthand for the unknown and therefore a genteel cop out. In our short review of the vocational education and training structures of Japan, we look briefly at the Japanese labour market and try to mark out some of its economic content in spite of the tendency to enculturize that which is not yet well known.

Regarding the reliance of Japan on foreign trade, we find that she has the smallest exports and imports to GDP ratio in the OECD. Nevertheless, her trade surplus is the second largest in the OECD after Germany. In contrast, the largest Japanese companies have only around five per cent of their output overseas which compares with 15 per cent - 20 per cent for their European and American rivals. In addition, the number of Japanese who travel abroad each year is still small compared with the usual pattern among the rich western OECD countries. For the greater proportion of Japanese, direct contact with foreigners is still very rare.[3] Some of this we can expect to change with time.

Table 6.1: Japan - basic data

Population 123 m	**Area 378 KM^2**	**Density 326per km^2**
Total civilian employment (TCE) 61m		A 7.6
		*Sectors I 34.3
		S 58.2
GDP p.c. $ 23,305	**Exports + Imports =	16.9
	**Government Current Receipts =	33.3

Sources: OECD (1992, a,) and Keizai Koho Centre (1988)

*%TCE **% GDP

Employment

In Table 6.1 above, the total civilian employment is about half the population. On the basis of Fest's data Japan has the seventh largest employment to population ratio lying below all the five countries in this volume except Austria. Labour market performance in Japan is regarded as among the most satisfactory in the world according to the OECD.[4]

Its unemployment rate varied between one per cent and 1.7 per cent in the 1960s. It reached 2.2 per cent in the 1970s, in the 1980s it peaked at 2.8 per cent and by 1993 is expected to be 2.3 per cent.[5] By any standard this is an exceptional achievement for a large economy. We will now review briefly the more general reasons for this low unemployment before we begin looking at the Japanese education and training systems.

First, Japan as a society has a strong commitment to full employment. For example, article 27 of the Japanese constitution provides the right to work for its citizens and the 1947 public employment security law aims to secure employment for each person by giving him the chance to engage in a vocation suitable to his ability. The Employment Measures Law also states that full employment is the goal of the state.[6]

To look beyond the legal structures for factors to help explain this full employment approach, we could refer to the industrial relations situation after the war when the main concern of the occupation forces was the restoration of the Japanese economy. For this reason the liberalization of the trade union movement was considered to be one of the essential elements in the democratization of post-war Japan. The Labour Relations Adjustment and Trade Union laws enacted in 1946 outlined, inter alia, the basic principles for the establishment of the trade unions. In that year, the May day rallies were held all over Japan with slogans such as democracy and the overthrow of the government. With this growing pressure for democratisation, the high level of unemployment and the impoverished position of many, the industrial relations climate was dreadful. These disputes reflected workers' problems but also weakened the competitive edge of many large Japanese companies. After this period of confrontation workers and managers both came to realise that cooperation was essential for survival and, as a result, agreed to build up the life-time employment and seniority wage system and, most importantly, they began not to be so keen to lay off workers during a recession. Since then the fiercest disputes in Japan are often related to job security and the violence which occurred during the closure of Japanese mines in the early 1960s is still a warning to management that workers will vigorously dispute staff lay offs.[7]

Some commentators have argued that the Japanese jobs commitment developed as part of a national effort at international competition, resulting in a type of paternal capitalism.[8] Whatever about the attraction of using such broad sociological brush strokes as paternalism to explain Japan's attachment to employment, it should be said that the reasons for the development of such a commitment are many and varied and include the experience of the War, the efforts to adapt to the idea of American style unions and also the need to be competitive.

Second, the OECD referred to the low cyclical sensitivity of employment as being due to (a) the large overtime element which allows adjustment and (b) the labour hoarding of large firms to stabilise employment in the short term at least. For example, in the

latter case, the necessary employment adjustment to the 1970s oil crisis was spread between 1975 and 1979 thereby depressing labour productivity. However, productivity rebounded sharply when the economy turned up and the labour slack was more efficiently used. A similar though less marked pattern occurred in the early and mid-1980s.

Third, low unemployment over the medium term has also been assisted by strong output and investment growth. However, as importantly, it has also, according to the OECD, been facilitated by a greater capacity for structural change in output than in most other countries without the need to make parallel changes in the pattern of employment. In this respect the famous life-time employment system of the large firm sector facilitates their ability to absorb change. Here, large firms with a variety of interests organise their operations with the agreement of their staff who are retrained for new activities and are happy to do so because of the quid pro quo of relative job permanence. This is an area we will look at in more detail below.

Many of the normal range of worker related regulations and supports exist in Japan. For example, redundancy law exists, but its operation is not seen as a significant burden by the Japanese employers. Income maintenance also exists for the unemployed as elsewhere, in spite of relatively low benefits by European standards. The OECD drew attention here to the special 1984 premium for dole recipients who find a job well before their benefit period is up.[9] In addition some of the normal range of job subsidies are available some of which we will come across below in the chapter on training.

Fourth, the Japanese, despite their small public sector, were not averse to using fiscal policy to maintain and support the economy in the troubled 1970s and early 1980s. In contrast, its wage system is relatively decentralised and this has had its own benefit for macro-economic efficiency. *However, among all the above factors, probably the most important in many ways is the Japanese ability to adapt and here the role of labour quality and skill is paramount.* This then is the focus of our present work.

Background To Education And Training System

To say that the Japanese are keen on education is probably an understatement of sorts. The Japanese according to Cantor are obsessed with education. According to Tasker, education, in the 'curriculum vitae' world of Japan, holds the key to all that is most desirable in life - power, wealth and social respect. An OECD mission to Japan classified it as a 'degreeocratic' society where one's life chances are determined by examinations. This esteem for education is then reflected in working life where it is argued that the wage system honours the educational status of labour and not the skill status. Whether this is fully correct or not, it is still true to say that Japan is a society which puts great store by her educational system. However, her achievement is not only to be a well educated society in the sense that 99 per cent of the population is functionally literate compared with say 80 per cent in the US. What is also interesting is the strong commitment by Japanese management, staff and unions to continuous skill improvement at all levels of the work organization and the impact this has had on the Japanese economy.[10]

A number of international specialists have been impressed by the Japanese educational system and have commented positively on its role in the economy. To take but one of very many examples NEDO in a report on education and training on Japan, the US and Germany refers to Japan as the education nation. However, many have also pointed to the fact that Japanese overall expenditure on education as a proportion of GDP is nothing exceptional. It is also pointed out that resources are poor often with cramped conditions, high pupil teacher ratios and ill-heated classrooms. It has been argued that the Japanese educational success has little to do with the system itself and much to do with the assumptions and expectations that society hold towards it.

The Japanese approach to education and training permeates her society. At national level, for example, the Prime Minister's Council on Educational Reform, while noting some of the weaknesses of their educational system, strongly emphasised the need to create a life-long learning society based on a long-term perspective. At firm

level this is reflected in the fact that company directors of personnel are held in the highest regard. According to Rehder their influence, unlike their US equivalent, is very great as they are seen as being responsible for the management of their firm's most valuable resource - the employees.[12] Although the US position will have developed somewhat since then, a sizeable gap still exists between these two countries. At community level Japanese teachers are an important figure in the community and are often addressed as status superiors by those of greater age and economic power. In addition they get a higher salary than engineers and there are as many as five applicants per teacher vacancy.

Some commentators have advised that, in looking at Japan western experts should not excessively concentrate on their formal education and public training programmes. Thus it is often the case in looking, for example, at any country's vocational, education and training system that the first stop is the public sector's schemes. Part of the reason for this is strategic - they may be easier to access and especially in a small country, may provide the bulk of material for inspection. Second, even when a range of material is available on a country's private sector training, it is more difficult, especially for outsiders, to establish fully its comprehensiveness and general applicability. In Japan it is fair to say that a full understanding of her learning process is only to be found by also looking at her in-company training system. We referred, at the start of Chapter 1, to the catwalk tours given to foreign business delegates looking at a Japanses company's production process. The visitors are suitably impressed by the sophisticated equipment but are rarely encouraged to concentrate on the developed interrelationships between the skill levels and organizational structure. As the Japanese executive said - we now know that the way we develop and organize our workers gives us our edge over our Western competitors, so from now on that is our top corporate secret.

In spite of the importance attached to education, the Japanese still do not exhibit political interest in its system in contrast with certain other OECD countries. However, this may be so for two reasons. First, learning and education is generally so endemic in their system that VET does not need to be as underlined and set

apart. Second, Japan has an enviable record on unemployment in general along with a low youth unemployment rate. The latter problem in some OECD countries provided a strong incentive to develop a young adult related VET system. In spite of this, however, we will see that education and training and in particular in-firm training and self-development are strong elements of Japanese society. Also this interest in skills and learning is not new to Japan, nor indeed is the Japanese ability to learn from other societies.

Japan has again and again studied foreign methods and processes, picked them over, taken out what she wants and then Japanised them by incorporating them into her own system. There is nothing new about this process among countries. Ireland has done it to Britain, Sweden to America and now much of the world is doing it to Japan. However, at critical moments in the development of her society Japan has done it with a vigour and order that sets her apart in this respect. For example, during the Meiji period (1868 - 1912) she sent envoys to the US and various European countries, in particular England, France and Germany. These envoys visited centres of government, commerce and industry. One of the conclusions of the early 1870s visit, according to the delegation, was that other countries were richer not because of their natural resources or industriousness but rather because of their skill levels and the application of science to production, planning and organization.[14] The Japanese also invited thousands of foreign experts to come to teach and work in Japan during this period - for example the College of Engineering in Japan was established by a young British Engineer, Henry Dyer, in 1873. He built his own unique system of engineering education which at that time was outstanding by world standards. This learning process was to continue and develop in this century. For example, business leaders studied German and US methods of production between the wars and most expressive was the image of the first entrance examination to the International Education Centre (IEC) after World War 2. According to Itabashi, the IEC chairman 'we had only enough room for 100 students.. located in the ashes of Tokyo, but there were almost 3,000 lined up.. waiting to be admitted'.[15]

Thus for the past hundred years or so the determination to build up Japanese skills by looking at other countries has been part of a collective society drive to strengthen her economy.

Why should we look at the Japanese education and training system - apart from the fact that Japan is a low unemployment country and possibly there is something to be gained from a closer inspection? Why also should we trouble ourselves trying to understand the multiple parchment layers of what some feel essentially to be an unexplainable culture? Why in this context not give in and admit as McAleese and many others do that the success of the Far East in creating jobs may be mainly due to cultural factors.[16] The viewpoint held here is that to identify Japanese success as being due to cultural factors is scientifically to throw in the towel, holed and all as it may be with the problems of cross society analysis. In this context there are many misconceptions about Japanese structures. For example, some observers consider that the Japanese worker's apparent compliance with management is a cultural thing. That this is not so can be explained by the fact that the generally recognised Japanese spirit of cooperation arises from bitter experience of significant industrial strife following the War.[17] Thus if the Japanese themselves are keen on cooperating with management on say in-firm training schemes, there are good reasons for this, reasons which are both identifiable and logical.

A difficulty in looking at Japan for lessons is that western specialists may concentrate their focus on what they feel are easily transferable practices. For example, a Japanese management tool like the 'just-in-time' method. One must never forget that such practices are integrated elements of the Japanese system and it may be necessary to clarify the context within which they operate prior to any advice on transplanting.

Before we looking at Japanese training systems and the educational system on which it is based, it is as well to clarify that our inspection of Japanese methods is now quite common place among western academics, management experts and public representatives. As regards academics, Gordon, in his review of Japanese related business literature, almost exhausts the reader with his two hundred pages of quotes, references and commentary

from the literature which arises from what he calls the 'sheer ferocity' of western interest in such concepts as Japanese management techniques.[18] He refers to the recent emergence of what constitutes almost a new genre of business literature which focuses almost exclusively on Japanese management techniques and reflects a new trend in the development of management theory. In his conclusion he says that the goal of the American literature on Japan has been to affect major changes in American industry and ultimately its society as well. He also says that as people study more about others they also learn more about themselves.

Regarding management practices, in Britain the term 'Japanization', according to Towers entered the literature in 1986. This is a summary term to describe, among other things, the efforts by Western firms to emulate Japanese practices. Japanization by British firms is an initiative taken not so much in response to problems of labour turnover and absenteeism but rather to problems of international competitiveness. In contrast, the European and US quality of working life initiatives of the 1960's and 1970's - the Volvo example being most often given - occurred in the content of rapid growth, tight labour markets and related labour turnover and absenteeism problems.[19]

Public representatives have also been looking positively at Japan. In Britain one of the many interesting summary papers on Japanese achievements has emerged from the House of Commons Library Research Division. One can imagine great numbers of MPs assiduously seeking out relevant quotes from such papers. Denis Healy, previous Defence Secretary and Chancellor of the Exchequer, refers to the fact that the startling contrast between the economic efficiency of Japan and the US and Britain led him to learn as much as possible about the secret of their success. To move next door to Ireland, the leader of the opposition has suggested it is worth looking at the Japanese method of organising workers.[20] With the above as background we now look at the formal education system.

Education System

We first look briefly at the history of education which has three great phases - that which led up to the Meiji Restoration of 1867, the Meiji period and the period following World War Two.

EVOLUTION AND ORGANIZATION

Education has always been considered important in Japan and from early times much of the population has received some form of instruction. Originally much of this was provided by the priests who founded a large number of schools. Buddhist doctrines encouraged the education of the masses. By the start of the Edo Period (1600 -1867) a number of different schools had become quite common, for example, temple schools for training monks and priests which were later open to the laity, samurai children and commoners. Also samurai schools for samurai children which emphasised martial art skills, an appreciation of the samurai place in feudal Japan and so on. One of the strongest influences in this early stage were private schools called 'terakoya' for teaching reading, writing and maths for the children of merchants and townsfolk. Around 1850 there were almost 50,000 such schools. A terakoya would normally be only one room with a single teacher and 30-40 pupils. Thus even before the Meiji phase got underway Japan had already a relatively large number of schools and a literate population and some estimates show that by 1870 for example 40 to 50 per cent of boys and 15 per cent of girls were receiving some type of formal schooling.[21]

Japan's industrialization started during the latter half of the 1800's. The Meiji restoration in 1868 marked the first centralist government taking over power from the feudal system. Some key industries such as steel and shipbuilding were run by the Government, and foreign craftsmen and engineers were brought in to assist in building and operating the new firms. This new period saw a profound development in the components of the educational system. However, it still retained its philosophical base from the previous period. For example, it kept both its innate conservatism

and its strong respect for the authorised text - something which still continues today. In developing its system, Japan used the American hierarchy for its school structure and the French system for the administration of education. At that time the education system was geared to schooling the pupils for industrialization and focused therefore on national rather than personal aspirations. Under the Education Order of 1877, education was divided into three progressive stages - elementary, middle and university. These stages were developed on a priority basis.[22] The first concern of the Meiji government was for higher education and the development of an elite. Next, the emphasis was placed on the primary stage. In this respect it was notable, that immediately after feudalism, Japan had a reasonably egalitarian educational system in which the children of the former four classes (samurai, merchant, artisans and farmers) sat down in the same classes together. At that time, although secondary schooling was available, it was only for the limited few who would go onto higher education and the course content was general rather that vocational.

Compulsory education of three to four years was introduced as early as 1886 and this was extended to six years in 1908. By the early 1900s Japan had a system of almost universal primary education and by the 1920s, close to 100 per cent literacy was achieved. In this regard, Levine and Kawanda suggest that with this rapid expansion of formal schooling, relatively early in its development, Japan appeared to be 'overendowed' with educated human resources compared to other industrial countries at similar stages of development.[23]

As the Japanese economy became more developed towards the end of the last century, a vocational education and training system to provide skilled labour became recognised as an essential requirement. In the early 1890s two types of secondary vocational schools were introduced - Apprenticeship Schools (1894) and Industrial Supplementary Schools (1893). The former provided organised training in a school rather than an apprenticeship in a factory. They failed however and were eventually integrated into technical schools in a 1920 Act. The Industrial Supplementary Schools accepted mainly primary school leavers and provided them

with industrial education and training for three years. These schools continued to grow and develop until the mid-1930s when they were converted into youth schools. Despite the demise of the apprenticeship schools sporadic efforts were made after the 1920's to provide craftsman training in public institutions but they never came to much. The government's efforts to provide in-school craftsmen training during the pre-war period was therefore viewed as a failure. Instead schools were seen as a road to higher social status and not as a preparation for a craft.

After World War One the nationalistic orientation of Japanese education increased. By the start of the second Sino-Soviet war in 1937 militarist attitudes had become quite widespread. The educational system paid great attention to such things as ensuring text-books reflected the proper nationalistic fervour. The defeat of Japan in World War Two and the allied occupation saw a considerable reform of the education system. Following the war the pre-war dual track system of general and vocational education was replaced by a single track system with an elementary, middle and high school structure followed by a two to four year period at third level. The Fundamental Law of Education in 1947 stated that emphasis was to be placed on encouraging in pupils both individuality and a love of peace. Some of the legislation which followed this introduced the decentralization of public education. This was part of the overall process of restructuring of Japanese society to ensure that such things as latent nationalism were not allowed to regrow in the post-war society. In recent times, however, the Ministry of Education has gained considerably more control over the system than was envisaged by the allied planners. This is probably more to do with the normal tendency of central government to encroach on the control of local government than anything the occupation planners may have worried about. Nevertheless, minor controversies have arisen about the interpretation in official textbooks of such sensitive issues as Japan's role in the Pacific in World War Two.

The central education authority in Japan is the Ministry of Education, Science and Culture which plans, coordinates and legislates for the various part of the education system. It also

guides, advises and assists the local education authorities. There are 47 prefectures each of which has a board of education. Each prefecture is further subdivided into municipalities of which there are 3000. Each of these has a board of education. The above three layers of central and local government share the responsibility for the financial support of education. Each administrative level pays for its educational activities from its own revenue sources.

We now look at compulsory education followed by upper secondary, tertiary and adult education.

Compulsory Education

Compulsory education begins at six years of age. It includes six years of elementary schooling and three years of lower secondary. At 15 years of age pupils can move into the post-compulsory phase or into the labour market.

In elementary schools, a number of subjects are taught by one teacher, whereas topics such as art and music are taught by specialist teachers. There is no selection procedure when moving between elementary and lower secondary - a child who has completed the former must be admitted by the lower public secondary school in the child's attendance area. For parents who want to use private schools these are available at all levels from elementary on and all such schools have selection procedures.

Lower secondary pupils are taught by a different teacher for each topic. Students at this level wear the same school uniform throughout Japan. Schooling is generally co-educational except for such subjects as physical education. The Ministry for Education, Science and Culture determines the subjects offered at this stage along with such things as the accepted textbooks for subjects and the minimum number of school days per year.

For Japanese children Hendry states that school life becomes almost their whole life. School hours run from 8.30 am to 5.0 pm, or 6pm during April to September and the school week is six days long with a half day on Saturday. It is more normal in Japan for children to be asked their school rather than their age and much of the responsibility for children passes to teachers. Hendry states that an accident involving a child is as likely to be reported to the school as it is to the parents.[24] Indeed during school holidays

children are expected to attend school at regular periods, the idea being that too much free time is seen as inadvisable.

At fifteen years of age youngsters decide either to continue school or seek work. The percentage of teenagers continuing education has increased considerably in recent decades as follows:

Table 6.2: Proportion of age group going on to upper secondary school

	%
1950	43
1960	58
1970	82
1980	94
1989	95

Source: ICE (1990, c, 18)

Upper Secondary Schooling

Although upper secondary school is not compulsory, it would hardly cause a lot of problems if it were, since only about five per cent of pupils leave the system after the compulsory stage is completed and all the rest continue. This is by any standards a very high retention rate.

There are three types of upper secondary school: full-time (approx. 97 per cent), part-time (mainly evenings) and correspondence. The 1947 School Education Law outlines the goal of upper secondary as being the provision of higher level general education and specialised education. When this system began, part-time courses were arranged for young people working full-time. Classes could be taken after work or at other times and eventually pupils would have enough credits to graduate. The setting up of these courses was considered to improve the equality of educational opportunity. However, the numbers of part-timers fell by over a third since the mid-1950's. Nowadays pupils enter part-time courses not because they have jobs but because they do not have the ability to get full-time places.[25]

One of the main elements of the post World War 2 education

reforms was the creation of a comprehensive upper secondary school system wherein schools would provide both general and vocational courses. The idea was that students with the assistance of counsellors would organise their choice of subjects on the basis of their interests and aptitudes. However, this comprehensive system was not developed and a 1953 circular from the Ministry of Education enabled universities to decide which subjects should be mastered for university entrance. The circular allowed upper secondary schools to organise their structures so as to prepare their students for university entrance. However, the real situation was that the upper secondary curricula had already developed in that direction well before the 1953 circular was issued. Thus schools were divided into either general academic schools or vocational schools. In addition within the academic secondary schools the curriculum was split between academic and non-academic.

The post-war educational reform held that the new upper secondary schools should be open to everyone and selection was only allowed if applicants exceeded school capacity. This open admission method existed only in principle because the number of applicants always exceeded capacity at the more sought after schools. Because of this and also due to the growth in demand for upper secondary places a circular was issued in 1963 stating that candidates should be selected whether or not candidates outnumbered capacity. This ability–based admission system was not used everywhere. The reasons being that less sought after schools would be short of pupils if they were as aggressive in their use of the admission system as more highly sought after schools. Thus the schools at the bottom of the ladder have been forced to accept students with low scholastic ability. Iwaki initially classified the Japanese upper secondary system as a quasi-open one because severe selection is done in the more sought after schools and the rest cannot afford to be too strict in their selection otherwise they might lose teachers if they fail to fill their capacity.[26] He had second thoughts later about his classification and concluded by identifying it as a 'seating-full' principle.

In conclusion, we can refer to an OECD study which said that although all Japanese pupils take the same syllabus there is a fairly strict hierarchy of schools.[27] This hierarchy is based on a school's track record in preparing students for entering good universities or good companies. Highly sought after schools also have high calibre

pupils seeking to enrol with them, a fact which helps solidify the hierarchy.

ORGANISATION

According to legislation, schools can be established only by national and local government and non-profit companies called 'school juridical persons'. Almost all compulsory schools are set up by local government. By contrast, the most recent data on upper secondary shows that 28.4 per cent of pupils are in privately owned schools.[28] These schools are more concentrated in urban than in rural areas and they are only loosely supervised by the authorities. Thus the considerable leeway they have in running their school has resulted in a wide variation in their quality. In the hierarchy they tend to be at the very top or bottom. Local Government schools enrolled 71.4 per cent of pupils and have traditionally occupied the top to middle range of the hierarchy. National or state schools enrol only 0.2 per cent of pupils. They are attached to the education faculties of national universities and cooperate with them on educational research. In addition they provide the university with practical teaching experience. These schools are often at the top of the hierarchy in their area.

Regarding the organization of courses, subject differentiation in Japan begins at upper secondary level. According to the data, almost three-quarters of upper secondary pupils take academic courses and the rest take vocational and other specialised courses as outlined in Table 6.3.

Table 6.3: Percentage of upper secondary pupils by course type

Course type	% of pupils
General	74.0
Commerce	10.4
Technical	8.7
Agriculture	2.8
Homemaking	2.4
Nursing	0.4
Fisheries	0.3
Other	1.0

Source: (ICE, 1990,C,23)

As a result of efforts by both the vocational teaching profession and industrialists the Vocational Education Promotion Law, which provided funding for vocational schools, was introduced in 1951. Following this, these schools had their best period between 1955 and 1970. This period coincided with the fact that during the sustained economic growth of the early 1960s, the greater proportion of upper secondary applicants were from rural areas and wished to move to urban areas after already receiving some technical education in lower secondary school. Vocational courses were taken by 41 per cent of pupils in 1960. This figure fell to 32 per cent in 1980 and is now, according to the table above, at only 16 per cent. The decline in the level of pupils taking vocational courses was due to their inability to attract their share of the brighter pupils. This difficulty was compounded by the fact that such courses became identified as places where unsuccessful applicants to general courses eventually ended up if they decided to remain in the school system. Some argue that since vocational courses lay at the bottom of the upper secondary hierarchy, they acted as a type of punishment for those who have failed to get into a general school.

Recently, only about 16 per cent of upper secondary schools in Japan offered vocational courses.[30] These are called industrial, commercial, agricultural, music, etc. schools according to their speciality. In addition, 31 per cent of high schools provided both vocational and general streams. These multiple course schools arose from the post–war reform attempts to create a comprehensive school system. Yet even in these multiple course schools, students must choose their courses before they apply for a school place.

Despite the wide range of vocational schools and schools with a vocational mix, Leclercq states that the data masks the fact that vocational courses place considerable emphasis on general knowledge since half the graduation credits are in general subjects and the rest in vocational subjects.[31] Even within the vocational subjects themselves, the theoretical content is extremely important with the practical work providing only an opportunity to apply the theoretical knowledge acquired. For this reason equipment in vocational high schools is often rather poor because the main goal is

to teach the general machine principles rather than the operations on the most up to date technology. Therefore the vocational courses given by vocational schools do not differ significantly from those in the academic upper secondary, except that they mainly offer only the less demanding general options.

On the basis of this, Leclerq states that graduates of Japanese vocational courses do not have the necessary skill levels in their special field to begin a career without additional training. He states that they have a partial knowledge of certain technical topics related to a broad group of activities and only a limited familiarity with the methods used in any one professional area.

In regard to new technology, the course of study for upper secondary was revised two years ago and the new course begins in the 1994 school year. Of the 29 new subjects in the specialised vocational area, 41 per cent reflect the general impact of new technological developments. However, although it is difficult to anticipate how these new subjects will be taught, one suspects that the present approach of teaching general technical principles may, if only slowly, be eroded. In this context the Ministry of Education stated that it will utilise new information media for educational purposes and will conduct research work on high quality educational software and computers suited to educational purposes.[32] The reason however, for the above suspicion relates to the particular nexus in Japan between upper secondary and the labour market which we partially referred to above. Here, as we will see later, many Japanese firms are quite happy to employ new recruits with no company relevant skill other than a good general education which they can compensate for by company training.

After secondary

According to a study by Rohlen the vast majority of upper secondary school pupils hope to gain entry to university or the two year junior college and their studies are mainly geared towards this goal.[33] As a result of this pressure, the upper secondary general curriculum could be referred to as being 'transfer-orientated'. This is not, however, always the full story, especially in rural areas,

where aspirations are more geared to the local labour market. In regard to a pupil's labour market preparation, a very strong belief in Japan relates to what sociologists term as 'effortism'. One aspect of this is that children and teachers believe that it is not simply innate ability that produces results but the amount of effort put in by the pupil. The labour market side of the equation is that a company often judges graduates not by the particular course of studies they followed and its possible relevance to the company but rather by the level of effort put in by students to succeed in their studies. The litmus test here is the type of school they attended and their results. This approach is not universal, however, in that it can depend on the type of firm.

Japanese corporations in their recruitment of school graduates often take a somewhat different approach to their equivalents in other OECD countries. In large Japanese firms, those recruiting do not generally seek out special types of skilled upper secondary graduates. Traditionally they prefer to employ highly qualified and generally educated high school and, as we shall see later, university graduates rather than ready-to-work recruits. Such highly qualified recruits are felt to be best because they are expected to have basic knowledge, be flexible and be able to take full advantage of the company training opportunities. Large Japanese corporations do not have a well defined set of job structures and, because of the way staff work in groups, a lack of a clearly defined job demarcation system is an advantage. In addition Japanese companies do not operate much on the external labour market except for very specialist skills. Most of their promotions are filled internally by training and retraining their staff.

This system helps explain why the post-compulsory school phase is so competitive and so biased in favour of general education. If parents hope to provide their children with a chance of getting a good job they must encourage them to do well in upper secondary school. This will improve the likelihood of them getting into a good company in the big recruitment process organised each spring. Better still, if they succeed in helping them to get a place in a prestigious university.

In relation to small or medium sized firms new recruits with

specialist vocational training are often preferred when new staff are being employed for technical postings. Such companies do not have the training opportunities of the large ones and yet they will not expect their recruits to arrive completely job ready. Thus, even in these firms a certain amount of training is normally provided to turn vocationally qualified upper secondary school graduates into fully competent employees.

AN EDUCATIONAL SUCCESS?

According to Ellis et al this system produces pupils who achieve very high results in standardised maths and science tests. Prais, in comparing the curriculum of Japanese vocational high schools with their British equivalent found that they were more demanding, more carefully structured and took pupils further. *In his paper he referred to the fact that what Japanese pupils learned of maths in their first seven years of schooling (six to thirteen) required nearly 11 years (five to sixteen) in England implying that Japanese learn maths 50 per cent faster per year.* Probably as important is the lower disparity of achievement in Japan. The coefficient of variation in levels of ability was roughly 30 per cent less. In addition the evidence indicates that there is a relatively greater backwardness among English low attainers than their Japanese equivalents.[34]

In regard to students doing tests an interesting point is that calculators are not allowed in Japanese exam halls. In addition to their use in England widespread use is also made of them in relevant tests in Ireland. Another difference is that little is to be seen in Japanese education of the 'modern' tendencies introduced into both English and Irish maths over 20 to 25 years where some of the original arithmetical and rote learning elements of maths were replaced by more conceptual processes such as set theory.

Prais refers to the fact that Japanese education is textbook centred. The power of the Ministry in the supervision and, in some cases, censorship of textbooks may appear to an outside observer as a little unusual. It does provide a fixed reading base from which pupils and teachers can work. If teachers need extra material for their class they can usually make use of additional manuals which

contain tests related to the authorised texts. This can be contrasted with the more 'child centred' approach which until recently dominated US teaching.

To conclude, such factors as the low variation in maths ability and the high quality attained in even basic computation and in science, generally have a considerable impact on the quality of the labour force both as it arrives at its first days work and also as it learns and relearns throughout its career.

Apart from the level of effort put into maths, Japanese schooling is intense in the sense that Japanese pupils spend more hours, days and weeks in the year in school than in many other OECD countries. According to Sako and Dore, the Japanese child gets in 12 years as many teaching hours as a British child would in 14 years and this excludes the contribution of the private cram school.[35]

Reflecting these differences, and possibly supporting them, is the fact that the political structures in Japan appears to treat education with somewhat greater attention than in many other OECD countries. This is apart altogether from the level of government expenditure and relates to the level at which education is dealt with. For example, it took a parliamentary Bill (December 1989) to replace 'social studies' with 'civics' and 'geography and history' for the purpose of upper secondary school teacher certificates. To revise the official textbook list required a government regulation (April 1989) and the cabinet issued a statement on policy guidelines implementing educational reform on the 6th October 1987, a fact which was felt merited inclusion in the Japanese submission to the ICE conference in both the January 1989 and September 1990 issues.

However, in spite of the high level focus given by the government to educational matters, we should mention here the relative failure of successive governments to implement significant change in the education system since the start of the 1970s. Twice in that period the government embarked on major educational initiatives. The first reform culminated in the publication of a comprehensive reform programme in 1971. This recommended that Japan look at possible alternatives to the standard 6-3-3 system of elementary, lower and upper secondary school. A unified secondary school system was to be considered and the upper

secondary curriculum was to be made more flexible by introducing streaming and grade-skipping. However, the proposals met a hostile response from a variety of quarters and only some of the minor proposals were introduced. The 6-3-3 system remained and with more pupils than ever wishing to go to university, virtually all upper secondary classes were directed towards helping pupils pass the standard university entrance exam. The second initiative relates to the formation of a cabinet-level advisory body established in 1984. This body was called the Council on Education and again tried to make the education system more flexible. According to Schoppa, its main aims such as, for example, flexibility of university entrance exams and textbook deregulation, were all blocked for the second time in under twenty years. Amaya says that major reform takes place in Japan only when there is strong external pressure. The inside, he says, has no initiative. With economics, Japan has been fairly successful since the outside is so strong that it can force reform. But with education there is no outside. The post World War 2 education changes were, in this regard, the result of outside forces.[36] However, Amaya appears to forget about the Meiji education reform which might be interpreted as being due to a very strong central government and possibly the more obvious connection between the economy and the education system.

As regards the role of teacher in the success of the system, it must be noted that large classes, as we saw already, are not unusual in Japan and the Ministry of Education has recently declared its intention of reducing the maximum class size to 40 pupils. In spite of this, and the relatively weaker than expected educational facilities, the achievements of the successful pupils have to be explained. One point, already referred to earlier, is the relatively high overall quality of Japanese teachers. In addition, the great majority of upper secondary teachers specialise in only one subject area and teach on average about 14 hours a week. A 1974 law was aimed at attracting high quality people into teaching by providing good salary conditions which were improved progressively between then and 1979. In addition to a salary, a public school teacher in Japan is paid a variety of allowances for housing and family along with a bonus. The latter is the most important and is

paid three times a year and is in total equal to over 40 per cent of salary. However, teachers work hard for their salary both out of school hours as well as in them. Despite the militancy of the main teachers' unions there has never been a clear mandate given by members for the unions to fight for a detailed job contract which could only cause a disimprovement in teacher productivity or an increase in salary to compensate for all the extra hours. In this respect, a middle school third-year teacher could hold at least three parent-child-teacher meetings concerning each child's future and at least one of these would be in the child's home - and this with each of 40 or more pupils.[37]

Another more evident reason is the wide availability of special cram schools which have been around since the Meji period. These are called either Juku, which cater for all levels of the education system, or Yobiko, which specialise solely in preparing upper secondary students for the very difficult university entrance exams. These schools vary from small single room operations to highly structured nation-wide chains. About 20 per cent of elementary school and over half of lower secondary pupils attend Juku.[38] The subject most in demand is maths partly because of its importance in gaining university entrance and also because it is seen as a measure of basic intelligence. The high level of Japanese numeracy owes a good deal to this dual educational track - a full day's schooling followed by as much as four hours a day private tutoring. This of course can bring intense pressure on young people who barely having time to relax after a day's school must then take on the rigours of private tuition. Private tutoring of course is not all career centered. Juku classes are also taken because of the belief in self-development and classes are provided in other areas such as music, calligraphy, and so on.

Part of the explanatory matrix is, of course, the child's family. Time and again the critical role middle class mothers play in instilling an education ethos is referred to in the literature, as the social phenomenon of 'education mothers'. They strive to ensure that their children (especially sons) succeed in school. They have been described as awe-inspiring matriarchs who hector and cajole their offspring into hours of extra study.[39] In this type of social configuration, the father is the company man engaged from morning to night on company business while the mother's role is to

run the home and rear the children. Part of the measure of her achievement, in the latter context, is her children's educational success.

WEAKNESSES

Despite the above, the upper secondary school system in Japan has its own difficulties. First, a wide number of publications refer to the high level of stress and the Japanese themselves are the first to point this out. A report on a CEDEFOP mission to Japan argued that this stress is experienced by many pupils and parents and is caused not so much by final examinations, as in Europe, but rather by entrance requirements.[40] An obsession prevails with regard to being admitted to the best schools and universities so as to get the best jobs later on. This pressure on young pupils, in particular, is intense and is often referred to as 'examination hell'. In the international literature this is an almost an overly worn phrase but according to the evidence an accurate one.

Since around 1975 the attrition rate from upper secondary has risen steadily.[41] A 1984 survey by the Ministry of Education shows that the main reason for student drop-out was pupil dislike of study, their lack of adjustment to school life, delinquency and so on. By contrast, a 1959 survey indicated that the main reason was poverty or inadequate income. One might deduce from the above that the increased attrition from the educational system among these young adults has been due to the growing lure of a counter culture which evokes, like the hippy culture of the 1960s, an increasingly anti-establishment stance by pupils. Although this may play some small role in the increasing attrition rates and the ever growing wealth of Japan may be seen as a form of evidence for such a thesis, it is very doubtful if this plays more than a minor role. Japan and its pupils still inherit a relatively counter-culture free society. One item of evidence for this is the increased public comment on school bullying in Japanese schools in recent times. This has caught the public attention not because it has become widespread but because it was so unusual up until recently. In certain other advanced societies, school violence or bullying is often so commonplace that it is barely newsworthy. Japanese schools at all levels are still extremely well ordered. Thus it is very likely that the increased attrition rates are most likely related to the fierce

exam pressures under which Japanese pupils operate and the failure of some to meet the standard and take the pressures.

Second, the upper secondary school is divided in curricular areas and these were structured so as to prepare the able pupils to transfer to third level and the rest to move into the workforce. This curricular split however, has not fully worked. The pupils leaving general courses have a greater level of unemployment and produce twice as many marginal groups of graduates from vocational courses. It is argued that these marginal groups indicate that the division into these curricular areas, and the addition of vocational subjects on non-academic general courses, were not effective in preparing the less able general pupils for the workforce.

A third difficulty which has been given a lot of attention of late is the fear that the education system, with its strong emphasis on rote-learning and its often incredible pressure for results, may stifle creativity and autonomous learning. This concern has reached the highest levels in Japan and the Ministry of Education has stated that it intends to place more emphasis on the individual child and individuality in the future. This concern about the lack of individuality partly stems from a humanistic ethos but probably gets most of its government impetus from the link between individualism, personal creativity and scientific creativeness. However we view this point, it is not of major concern for our present purposes. We return to the point that the Japanese are very competent at self-learning in the post-education sector and this competence is at least partly based on the high quality education provided by the formal education sector. This is something we will look at in more detail later on.

Apprenticeship

Japan is one of those countries where the apprenticeship system is almost non-existent. Like Sweden and the US, it is an example of the schooling model of educational provision in the post-compulsory phase and therefore contrasts significantly with the dual system such as exists in Austria and Switzerland. However, its upper secondary mix between vocational/technical education and general education is completely different from Sweden's. Table 6.4 below shows that although the Swedish mix has become somewhat more general, over time the ratio is still 70:30 in favour of

the vocational/technical education sector.

Table 6.4: Percentage enrolment in vocational/technical and general education in upper secondary

	1970		1975		1980s1	
	Voc/Tech	Gen.Educ	Voc/Tech	Gen.Educ	Voc/Tech	Gen.Educ
Dual Model						
Austria	77.1	22.9	81.5	18.5	82.6	17.4
Switzerland			74.8[2]	25.2[2]	75.1	24.9
Schooling Model						
Japan	41.5	58.5	37.0	63.0	30.3	69.7
Sweden	74.4	25.6	71.9	28.1	70.0	30.0
U.S.	24.0[3]	76.0[3]	-	-	24.0	76.0
Mixed Model						
Ireland	33.5[4]	66.5[4]	34.0	66.0	32.7	67.3
U.K.	39.5	60.5	31.1[5]	62.9[5]	43.3[6]	56.7[6]

1. Austria, Japan and Sweden 1982, U.K. 1981, Switzerland 1983 and Ireland 1979.
2. 1977.
3. 1971.
4. 1965.
5. 1974.
6. The changes in the dates of collecting the data (from 31st December to 31st August) have impacted on the data.

Source: OECD (1985, a, Table 1.3, adapted).

In contrast, Japan's mix has become increasingly more general over the years, and the most recent data show that trend continuing with a 74/16 per cent mix in favour of general education.[42]

Japan has today no equivalent of the European apprenticeship system which allows young people to receive a certain skilled status after successfully completing a course of preparation. The majority of Japanese youths seek work today without any occupational qualification or even preparation. This does not mean, however, that apprenticeship has been irrelevant to Japan's training structures. The apprenticeship system had a certain role to play in the Japanese education system of the last century. This role, however, became rather limited as time went by and the early

apprenticeship system became subsumed into the education system on the one hand or the in-firm training system on the other. Thus, in a way today's dual training structures of Austria and Switzerland have their Japanese parallels, to some extent at least, in the vocational preparation of the Miscellaneous or Special Training Schools and in the induction and on-the-job training schemes of firms. This however, can only be a superficial contrast, especially when we consider the particular structures and evolution of the apprenticeship system and how it compares to the present system in Japan. In order to clarify this point we will look briefly at the apprenticeship system in the latter half of the 19th century and its evolution and decline.[43]

EVOLUTION

Prior to 1894 craft training based on the traditional apprenticeship system had operated in Japan. Here young workers stayed for a number of years with a master craftsman so as to learn a particular trade. This system began, as in European countries, during feudal times. However, it was unsystematic in its method and inadequately organised.

Therefore it was not surprising that a number of specialists had advised that the system should be improved. For example, Seiichi suggested in 1886 that the economic development of Western countries was because of better industrial technology and this in turn was assisted by superior vocational education. He argued that the large difference between Japan and England was due to the latter's vocational education system which contrasted with the Japanese 'adherence to the old custom of the apprenticeship system'.[44] He proposed the setting up of apprentice schools to provide worker training and improve the traditional apprentice system. It is worth noting here that the Japanese enthusiasm to catch up with Western countries in a wide variety of areas was particularly strong at that time in the vocational education sector.

The Tokyo Worker Training School was set up on the basis of an 1880 law to provide low level technical education. From the start this school played a leading role in Japanese technical education. The school was continually upgraded until it became the Tokyo Institute of Technology in 1929. In 1890, however, when it had been classified as the Tokyo College of Technology, the Worker

Apprentice School was set up to continue the worker training role of the college now that the college had moved on to the training of technical specialists. The next worker apprentice school had a dual role. First, it trained workers for large modern factories and second it provided the education for the declining apprentice system. Following this, Meiji government legally established apprentice schools in 1894. These were classified according to the regulations as places where 'subjects necessary for craftsmen were taught' and were to provide systematic vocational training.

The purpose of this legislation was to help modernize the traditional Japanese industries and to provide skilled labour for the new industries being brought in from abroad. As things developed, the apprentice school system had to put an increasing proportion of its resources into providing for the training needs of newly imported industries as the chemical and heavy industries. From around 1907 there was a rapid increase in the number of apprentice schools. Many of these new schools looked after the requirements of the new industries, while the original apprentice schools, which catered for the traditional industries, were slowly surpassed. From around that time the hope that the apprenticeship school system might modernise the traditional industries began to weaken. This fact became more obvious as the duality of the apprenticeship provision became clearer. Consequently, by the end of 1920, legislation on technical schools had abolished the apprentice schools and those apprentice schools which catered for the modern firms were upgraded to technical schools and the rest were closed down.

Thus the apprentice system went through two separate phases. First, artisan or craft apprenticeship which originated in feudal times. This was then followed by factory apprenticeship which itself developed a dual component of traditional and modern factory provision. Even though the tradition continued of calling young workers at small and medium sized firms apprentices, after World War I apprenticeship as a form of technical training for workers became, with some exceptional cases, a facade. Thus the apprentice school in a historical context had become part of a transitional phase from the traditional craft apprentice structure on the one hand to a technical school system.

Regarding education levels, the apprentice school, which was reorganised under the 1894 regulations, had made a transition from

a level which could be classified as that of primary technical schooling where it catered for the traditional industries, to that of secondary technical education where it provided for the modern industries. The technical schools operated at the secondary technical level.

Meanwhile what was happening inside the firms as the factory-based apprentice system declined and what replaced it in the training area? This is a question we will consider at the start of our section on company training and should provide us with a better understanding of why in-firm training is relatively so important in Japan today. In the meantime we will continue with the evolution of the vocational education system.

Apart from the apprentice schools of the latter end of the last century, another historical thread in the fabric of today's education and training system is the vocational continuation schools which were set up in 1893. Whereas the apprentice schools had originally been set up to promote traditional local industries, the vocational continuation schools were opened at night and on Sundays for part-time pupils in the farming, commerce and industrial areas. Vocational continuation schools aimed to provide a vocational philosophy and offer supplementary elementary education. In contrast to this, apprentice schools provided instruction on vocational subjects so as to produce skilled workers. Thus, while apprentice schools emphasised vocational topics, the continuation schools were less vocational bound in that they were also a supplement to elementary education. Over the next 20 years or so, the numbers of these schools rose sharply as the Japanese economy grew and the agricultural, commercial and industrial sectors expanded. By the last year of the Meiji period, 1912, agricultural continuation schools accounted for almost 80 per cent of the vocational schools.[45]

The actual role of vocational education schools evolved over the forty or so years from their 1893 inception. In the early period (1893-1902) they were classified as a type of elementary school emphasising supplementary education. In the middle phase (1902-1920) they were designated as a type of vocational school providing vocational education for young working people. In the final phase (1920-35) these schools were matched against the youth training centres which were set up in 1926. In this period they provided not only vocational education but also civic studies.

Finally youth schools were set up by merging of the youth training centres and the vocational continuation schools. The vocational role of these youth schools weakened as their nationalistic and militaristic function grew. However these youth schools, which were then designated as a secondary-level education school for working youths, provided the basis for three years of compulsory lower secondary school following World War 2.

Before secondary education was set up and fully developed the preparation of young people for skilled work was provided, in Japan's early period of industrialization, by the apprentice and vocational continuation schools. These schools could now be classified as early examples of today's miscellaneous schools. Much of the education not provided by the formal school system in Japan has, right up to present times, been provided by such schools. The type of vocational education we have covered in this section has become a thing of the past. Nevertheless, at the turn of the century it had a very prominent role in the early development of Japan's economy.

Post And Non-Secondary Education

In this section we look at a number of different educational bodies some of which can provide both secondary and post-secondary education whereas others provide strictly post-secondary education. The former contains miscellaneous and special training schools along with the colleges of technology. The latter refer to the so called junior colleges and the universities. We deal first with the former group.

MISCELLANEOUS AND SPECIAL TRAINING SCHOOLS

From about 1920 to 1925 miscellaneous schools began to concentrate primarily in the fields of industry, female vocations and new technology. Responding to industry's needs many of these schools provided short, intensive courses for lower and mid-level technicians. Moro-Oka explains that these schools had two phases of development between World War 2 and the mid-1970's. In the first phase, covering the first decade, they were used primarily to assist in the educational role of the reconstruction of Japan. In the second phase they helped in the provision of post-compulsory

education. The enrolment in miscellaneous schools at the end of this second phase were as follows: dressmaking/home economics 50 per cent, medical, sanitary, welfare 20 per cent, commercial, technical 10 per cent and industrial technical 10 per cent, art and culture 10 per cent.[46]

In the mid-1970s some of these schools supplemented secondary education and some operated in the post-secondary phase. Also, an increasing number of university graduates were working in areas different from those which they qualified in. They attended these schools to read up on subjects related to their work. For example, someone qualified in science who worked in construction could take an architectural course. At the secondary level, pupils in these schools, according to research, were keen to use their training in their later employment.

The normal period of education at such schools was more than one year but some of them had short courses of three to six months. Again early 1970s data shows that 26.8 per cent took courses of one or two years; 19.3 per cent took one, two or three year courses; and 13.4 per cent took more than three years.[47] By the middle of the 1970s however, the circumstances within which these schools were operating had changed considerably over the years and now most youngsters stayed on at school until 18 years of age. Because of this, the numbers seeking full-time upper secondary education outside the formal school system had declined significantly and those seeking post-secondary education had grown, particularly those who were seeking vocational rather than general education. For this reason the authorities had begun to look at how these schools could better provide vocational training for technicians and middle-level skilled personnel. They needed, however, to be better structured and classified and also to be given a formal position in the educational system.

A 1976 law turned miscellaneous schools, which met special standards set by the Department of Education, into what are called special training schools and these now became part of the higher education sector. At first it was hoped that all miscellaneous schools would be transformed into special training schools though less than half have done so. Because of their larger size, the latter still hold over 60 per cent of the combined pupils. In spite of this, it is fair to say that there has been a large increase in the number of these schools from just under 900 in 1976 to well over 3,000 at the

turn of the 1990s. To put both of these schools in context, the most recent statistics show that they cater for a pupil population equivalent to 21 per cent of upper secondary school pupils or 57 per cent of university students.[48]

An explanation for their popularity is that many parents believe that their children's work prospects will be improved by attending one of their vocational courses rather than taking a general course at a junior college or university. They offer courses in the following general areas: agriculture, business, culture, education and welfare, health, home economics, para-medical and technology. However the actual courses offered can vary greatly from one school to another except in certain areas such as surveying and para-medical where the curricula are very rigidly prescribed by the relevant government body. Since they do not therefore have an external validating process like say the City and Guilds in England or the NCEA in Ireland they can quickly adapt their courses to the changing needs of industry. This adaptability is, however, still somewhat limited by the national system of licensing which places broad parameters on many courses. As regards course demand, we saw earlier that the most popular courses in the mid-1970s were dressmaking and home economics. In recent years, however, these have gone into relative decline and business and computer courses have expanded significantly.

Another reason for their popularity is that pupils can avoid the intense exam pressure entailed in travelling through the lower, upper secondary and university conduit. Seventy five per cent of these pupils were on courses which required upper-secondary graduation and are often filled with what are humourously known as the 'might-as-well' tribe. Disappointed in missing the university they then pick this option. This of course exaggerates the position because many make these schools their first choice. Another advantage is that the great majority of special training schools, graduates find work in those areas they studied in and they are increasingly being sought by firms in preference to university graduates. This is especially true of the smaller firms which do not have the resources to turn university graduates into company skilled staff.

The most recent data show that over 94 per cent of special training schools and over 98 per cent of miscellaneous schools are privately owned. Because the Ministry of Education does not

regulate their standards in any detailed way concern has been voiced that these vary considerably from one school to another. Also it has been suggested that some are more concerned with profits than anything else. Despite this they provide an important and relatively flexible component of the vocational education system in Japan. In this respect they form an almost pure market type in that they are forced to comply with only limited central regulation and their total public subsidy is marginal. As we can see from Table 6.5 below they provide the largest component of post-secondary pre-employment vocational training in Japan and they are only surpassed in pupil numbers by the upper secondary vocational school system. We can also see the relative numerical insignificance in this vocational area of junior colleges and colleges of technology.

Table 6.5: Pre-employment vocational training

Institution	Pupil Nos	% of Pupils
Upper secondary vocational	1,442,000	40
Special, and misc. training schools	1,119,000	31
University prof. & science faculties	843,000	23
Professional junior colleges	129,00	4
Colleges of technology	50,000	1
Vocational training schools	32,000	1
TOTAL	3,615,000	100

Source: Cairncross and Dore (1990,5).

At this stage we can discern a trend beginning in the last century.

First, there was the apprentice system, then the apprentice schools and vocational continuation schools. Next the technical schools took over and we had the pre-war birth of the miscellaneous schools. Following the war we had the evolution of miscellaneous schools bringing us in 1976 to the start of the third phase with the arrival of the special training schools. There has been a 14 per cent fall in the numbers of special and miscellaneous schools since 1976 and the present. However there has only been a six per cent fall in the number of students which today is equivalent to 20 per cent of upper secondary pupil enrolment as against 30 per cent in the mid-1970s.[49] Thus, even though more pupils are staying on at upper secondary, and of course more going to university, these schools are still holding their own. What the next phase might be is difficult to anticipate. It may be that they will be somewhat more regulated by the Ministry of Education in the future. Yet even this expansion of the Ministry's powers may be limited for fear of damaging the flexibility they provide to the pre-employment vocational education system in Japan. As Dore and Sako would say, such an expansion of Ministry powers in this sector would be contrary to the atmosphere of live-and-let live hugger mugger which pervades Japanese society.[50]

COLLEGES OF TECHNOLOGY

In Japan, the classification of engineering employees is less clearly stratified than in many other societies. There are two broad categories in common use - craftsmen and non-manual people on the technical side whether they are university or upper secondary graduates. The latter group contrasts with non-technically qualified white-collar employees. Prior to the 1950s, lower secondary provided the education base for craftsmen and upper secondary the base for white-collar technical employees. However, in the 1950s and early 1960s, as upper secondary education began to be taken by those who later became craftsman, commentators began to argue about the need to provide some additional education at intermediate level to provide the formal education base for these white-collared technical staff. A few Junior Colleges already performed this function in a rather limited way, but their image was too strongly attached to a girls finishing school role to attract the required quality of entrants.

From the above considerations arose a new type of technical college called a College of Technology which was introduced in 1962. These Colleges provide five to five-and-a-half year courses following on from lower secondary school. Education in the fourth and fifth years is therefore equivalent to the first two years of higher education. They mostly concentrate today on technical and engineering courses and are relatively unimportant in the context of the entire post-compulsory education system with only 0.5 per cent of total pupil enrolment.[51]

However, these colleges are highly regarded by the Japanese and with staff student ratios of about 12 to 1 are much better resourced than vocational secondary schools. They are mainly owned by the public sector (94 per cent) and their pupils are highly sought by employers. The fact that their graduates may transfer to the third year of a university engineering faculty improves even further their attraction.

Higher Education

The higher education sector in Japan contains the following components. The data is based mainly on Table 6.6 below:

- Universities, where numbers are equivalent to 66 per cent of this sector's enrolment.
- Junior colleges which contain 15 per cent of higher education enrolment
- The fourth and fifth year of technical college which enrols less than one per cent of this sector.
- The post-secondary element of special training schools which holds 19 per cent of enrolment.

The post-secondary course of this school requires an upper secondary school diploma for admission. This is one of the three courses provided by this type of school and amounts to about 65 per cent of its total enrolment.

Table 6.6: Higher education Sector

Type of College	No	Enrolment (000s)	% of Enrolment
Universities and Colleges (4 year)	507	2133	66
Junior College	593	479	15
Technical College	62	19	*
Special Training School	2,581	612	19

Source: OECD (1992,b,179)

* Equals less than one per cent

The four year universities and colleges (both of these have the same Japanese name Daigaku) form the main component of the higher education sector. The Japanese do not have the long university tradition which is often evident in European countries. The first education objective of the late 19th Meiji government was to develop higher education and the first university was established as recently as 1877 in Tokyo.

JUNIOR COLLEGES

These colleges were founded originally in the 1950s in order to provide the much-needed technical skills for the growing economy. However, as we saw from Table 6.5 they only provide four per cent of pre-employment vocational training which in turn is only one-eighth of that provided by the special and miscellaneous training schools.

Their pupil enrolment is 15 per cent of the higher education sector and they are sometimes seen as the poor relation of the university. The major vocational course they provide is for primary school teachers and they also provide courses for day-care workers and auxiliary health workers. They are mainly associated with female education, with girls forming over 90 per cent of their enrolment, and they sometimes suffer from their image as a girls' finishing school. It is also suggested that many of their certificates are used to improve marriage chances rather than job chances. A widely held view in Japan is that women belong in the home.

However, although the female participation ratios are equivalent to European and US levels, the difference is in the type of work being performed. In Japan only a tiny population of working women are in positions of responsibility and the average woman earns only 52 per cent of a man's wage which is a far wider gap than exists in other developed countries.[52] Therefore good marriages are important from an economic point of view. Thus junior colleges may have a useful role in this respect.

UNIVERSITIES

Japanese universities provide the normal range of university courses ranging from bachelors, to masters and doctorate courses. However, as in other countries, there is a range of levels of quality among the 500 different universities and employers often view job applicants on the perceived quality of the particular institution as much as on the course results of the graduate.

There is a commonly held view in Japan of the university pupil taking a four year holiday following the gruelling 14 years or so of 'examination hell'. Many Japanese are supposed to view university life as a well earned rest between the hardship of school and the responsibility of working life. This arises partly from employers positive view of those who have achieved a university place, particularly one in a high prestige university. Also, employers are often more keen to employ highly qualified generalists who they can rely on to have the ability to be trained and retrained over their working life rather than employ university graduates with a particular skill. However, this is not always the case in that certain university qualifications give very specific career advantages and, to a greater extent than before, Japanese employers are also looking for employees with particular high level skills - eg. in the computing area. Nevertheless, one must admit that Japanese universities do not appear to have the same exam or work pressure which occurs in other areas of Japanese education. In addition there tends to be a low failure rate due partly to the high quality intake from the secondary cycle.

The higher education sector in Japan constitutes the weakest segment in Japanese education and requires considerable improvement. Research provided by the 1984 Council on Education shows that in spite of the high enrolment rate the quality

of the tertiary sector is considerably weaker than in certain other OECD countries in the proportion of public expenditure allotted to this sector. But one would need to know the size of the non-public sector's contribution to higher education before one could make any sort of definitive deduction. In this context the OECD, in a list of the relative enrolment levels in private third level education indicates that Japan at over 70 per cent has by far the largest proportion in private education. Of the 14 countries in the list only Belgium comes anywhere near the Japanese ratio which is over three times the average.[53]

Many Japanese specialists argue that a major cause of the higher education sector's problems arises from its inadequate post-war funding. During this time, various post-secondary educational institutions were turned into colleges and universities. This inadequate funding continued up to and during the 1960s and by the end of that decade the private sector accounted for 75 per cent of total enrolment. Throughout this period the financial assistance of government to private universities and other tertiary bodies was limited to long-term loans and subsidies for specific buildings and equipment. In addition to this funding issue, there was also a noticeable qualitative gap between the public and private sector third level institutions.

By 1970 the higher education sector's difficulties became rapidly more serious leading to a variety of reform proposals. During the 1970s the government gradually expanded the national universities and colleges in the regional areas and began to set up new concept universities. In addition government support for the private institutions was formalised in 1970 by providing subsidies for current expenditure by private universities and other tertiary bodies. If such developments had continued the government's financing of higher education would have substantially increased over the years. However, following the two oil crises of the 1970s Japan became part of the general drift to fiscal restraint which strengthened towards the end of the 1970s. This had significant impact on higher education expenditure and since then the level of government support to this sector has declined in real terms.

We, therefore, had three contrasting phases. First, the phase of inadequate resourcing of tertiary education, second, the expansionary phase in the early 1970s followed by a period of retrenchment starting at the end of the decade. Kaneko states that

the present situation reflects a return to how things were at the beginning of the 1970s. Along with this, the private institutions started to increase strongly their pupil charges in the mid-1970s and on into the 1980s when government funding began to weaken. Due to this the financial position of these bodies in recent times have significantly improved from what it was at the beginning of the 1980s. Thus the per-student expenditure gap between the private and public institutions in the tertiary sector has been significantly reduced. As to the future, Kaneko is of the view that the current pressures to depress expenditure on tertiary education is unlikely to fade away. This he sees to be part of the general disenchantment with the efficiency of the public sector.[54]

As regards the nature and quality of the relationship between university and employers it should be stated that these are a good deal more distant than in the US or Britain. In this regard, regulations covering public universities greatly restrict research or consultancy funding. However private universities are less formally restricted.

On this point the powerful Japanese Ministry for International Trade and Industry (MITI) frequently complains that Japanese corporations commission more research from European and US universities than from their own. However, as in many other OECD countries, companies, especially large ones, maintain close links with university departments so as to ensure a supply of good graduates. The Japanese have been concerned, especially since the mid-1980s, with the quality of scientific research and creativity. This stems partly from the fact that they are net importers of new technology. It also arises from the general concern with the possible side-effects in this area of excessive rote learning in secondary and indeed tertiary education and the possibility that this may stifle the creative mind. Part of the fall-out from this concern has been an increased interest in improving industry-university links.

NOTES TO CHAPTER 6

1. Yugoslavia was at that time the only OECD country referred to in Kennedy (1988)p14 which was poorer than Japan.
2. See OECD (1989) Understanding the Japanese Employment Context Note by Secretariat to Conference in OECD, 30-31 October 1989.
3. See Tasker (1989)p.27.
4. See Fest (1990)p.50 and OECD (1986,a)
5. See OECD (1992,c)p.40.
6. See APSDED (1988)p.288 and Japan Labour (1988) p.20.
7. See Ford (1987)p.274 and Tadaski (1988)p.10.
8. See Therborn (1986)p.109-111.
9. See OECD (1986,a) for some of the above points.
10. See Inoue (1985)p.22, Cantor (1985)P.61 and Tasker(1989)P.92, 94 and 265.
11. See NEDO (1984) Prais (1987)p.44 and Tasker (1989)p.93 and 94
12. See McCormick (1989)p.133, Rheder (1983)p.44.
13. See Dore (1989)p.147.
14. On these points see Kume (1987), quoted in quoted in Dore (1989,a)p.IX.
15. See Ibe and Sato (1989)p.41.
16. See McAleese (1985)p.21.
17. See Nakamura (1989,10) which explains how labour relations stabilised in the 1950s after a series of acrimonious disputes.
18. See Gordon (1988)p.1.
19. See foreword of Oliver and Wilkinson (1988)p.161.
20. See Barclay (1988), Healy (1990)p.558 and Bruton(1990)p.17.
21. See Schoppa (1991)p.24.
22. See Inoue (1985) and US Japan Marketing Centre (1986)p.269.
23. See Levine and Kawanda (1980)p.10.
24. See Hendry (1987)p.86.
25. See International Society for Educational Information, no date and Iwaki (1988)p.6.
26. See Iwaki (1988)p.20.
27. See OECD (1985,b)p.21.
28. See ICE (1990)p.21.
29. See Iwaki (1988)p.48.
30. See Sako and Dore (1988)p.76
31. See Leclercq (1989)p.186.
32. For example nursing, fishery, agriculture, information processing, electronic information technology, etc. See ICE (1990,c) Table1.11 and p.136.
33. See Rohlen (1983).
34. See Ellis et al (1992)p.8 and Prais (1987).
35. See Sako and Dore (1988)p.73.
36. See Schoppa (1991)p.247.
37. See Dore and Sako (1989)p.7.
38. See UK Japan Marketing (1986)p.272.
39. See Tasker (1989)p.95.
40. See Piehl (1987)p.10.
41. The attrition rate is derived by dividing the number of pupils who enter upper secondary but do not graduate by the number of 15 year olds. Iwaki (1988) provides some of what follows on this topic.
42. See ICE (1990,c)p.23.
43. For those who wish to read more on this topic see Toyoda (1987) on which some at least of what follows is based.
44. See Sato in Toyoda (1987)p.32.
45. See Toyoda (1987)p.12.
46. See Moro-Oka (1976)p.28.
47. See Moro-Oka (1976)p.30.
48. See Cantor (1987)p.37 and ICE(1990,c)p.16.
49. Se Moro-Oka (1976)p.29 and ICE (1990,c)p.16
50. See Dore And Sako (1989)p. 73.
51. Derived from Table 1-5 ICE (1990,c)p.21.
52. See Taasker (1989)p.120.
53. See OECD (1990,f)p.78.
54. See Kaneko (1988)p.2 and 42.

7 JAPAN

Training

This chapter looks at the training of Japanese labour in the post-education phase. It considers two different though interrelated areas. First, it looks at the public sector's contribution to training and this covers manpower training especially that which comes under the control of the Ministry for Labour. Second, it deals with in-firm training and retraining.

Manpower Training

In Japan, according to Ishikawa, the bulk of vocational training is carried out in industry. In an earlier work he said that about a quarter of the total was provided by the state through public bodies and three quarters was provided by private firms and authorised by the state.[1] Public sector provision of vocational training in Japan is somewhat complex and, according to McCormick, not very well coordinated.[2] The Japanese system of manpower training is much less unified and centralised than in certain other OECD countries. For example, the foreign observer, who is familiar with the relatively unified and centralised training structures in such countries as Sweden or Ireland may be disconcerted to be confronted by this more disparate and multilayered system. In our five country study, it is noticeable that the larger the relative size of the public sector the easier it is to get an overview on the manpower training structures. Yet for those who are concerned with effective systems, and particularly with systems which are in the overall context more employment efficient, the Japanese public sector manpower training system and its private sector cousin are, as we will see, quite worthy of study. A useful starting point to the former is to outline its development.

EVOLUTION OF PUBLIC SECTOR TRAINING

Following the increased unemployment after the 1923 earthquake the Tokyo municipality established a Vocational Guidance Association to provide vocational retraining for the unemployed in such areas as construction, civil engineering, etc. In 1935 Tokyo set up an office to train workers for the rapidly growing armaments industry and to help reduce unemployment caused by a decline in other industrial sectors. This office was placed under government supervision in 1938 and about 40 similar offices were set up around the country. Following the war new structures for training were created with the wind up of the munitions related training activity and the move to reconstruct the war damaged economy. The year 1947 saw a number of important developments in the area:

- The Ministry of Labour was established to look after labour affairs including vocational training.

- The Labour Standard Law was introduced and contained provisions aimed at providing a more organised system of craftsman training. The main concern of the Law however, was to protect workers from exploitation by laying down minimum conditions of employment. In a 1949 regulation a license system of instructor training was adopted. This instructor system spread over the years among the small and medium sized enterprises and also gave rise to a cooperative vocational training system.

- The Employment Security Law was introduced and contained provisions related to administration of training in public institutions and also on giving advice to industry. The Ministry adopted the Training Within Industry (TWI) method which was introduced from the US and began to prepare manuals for its use in industry with the help of foreign experts. When industry eventually became familiar with the TWI approach some years later it withdrew from its promoter role.

- The war and its aftermath had brought significant unemployment and vocational guidance therefore

concentrated on countering unemployment. The vocational guidance centres which were still in operation were regeared to provide short training courses for those out of work with the main emphasis on the building industry and certain selected trades. In 1947 the administrative responsibility for these centres were given over to the prefectural governments but they were still under the general supervision of the labour ministry.

In 1951 a significant reorganisation of government training was undertaken and the focus was shifted from retraining the unemployed to concentrating more on the needs of a growing economy which had already recovered from war damage and was now expanding rapidly. In 1952, the government began the process of setting up vocational training centres. These were called comprehensive vocational guidance centres and were funded by the unemployment insurance fund. These centres were put under the control of the Labour Welfare Corporation, a type of state sponsored body. The comprehensive vocational guidance centres along with the older type prefectural centres grew in numbers and provided the initial training for youths who started work after completing compulsory school at the lower secondary level. They also retrained the unemployed.

The 1958 Vocational Training Law represented a major shift to a more active government role in the area and was introduced against a background of a strong momentum to increase economic growth. This Law attempted to create for the first time, a unified and comprehensive system of vocational training. The previous former vocational guidance centres now became vocational training centres and there was an increase in the number of centres established each year. The new training centres were divided into *general* and *comprehensive* centres. The former were administered by the prefectural governments and provided initial training for basic skills. The latter continued to be run by the Labour Welfare Corporation and concentrated on higher skill training.

Following this law, for the system of vocational training was now clearly divided into two components. First, public vocational training for job seekers, new graduates, workers changing job, etc. Second, vocational training provided by a firm for its employees. However, despite the growing need for training the new vocational

training centres were not met with the enthusiasm that was expected. This was due to two main factors which in their own way explain a sizeable part of the Japanese vocational training story.

First, an increased number of young people, who had previously left school at the end of compulsory education, now remained within the educational system. Therefore, as the retention of the education system increased the need for basic skills training for the weaker school graduate became less and less. Second, the training programmes provided by the centres did not, as it turned out, adequately meet the needs of industry. In particular, the larger firms tended to take in a higher calibre school or college graduate and invest heavily in their training within the company, while those trained in the centres were mainly absorbed by smaller firms. The prominent role, which certain other countries public sector training centres had to take on in regard to training of the unemployed, was not at all as significant in Japan because of its continuously low overall level of unemployment. As a result, the mismatch between some of the training structures of the 1958 law and the actual needs of the economy brought increased pressure for change.

In 1969 a new vocational training law was introduced. One of its more important features was its insistence that training should be done gradually and systematically through the whole of a person's working life. In addition the former distinction between public sector and private sector training was removed and the same training standards were applied to both. What now existed was:

- public vocational training sponsored by a state body or
- approved vocational training sponsored by a private firm.

The older general vocational training centres became specialised vocational training schools whose broader remit now included basic and upgrading training along with retraining. The previous comprehensive training centres became advanced vocational training schools. These training schools were established under the approval of the Labour Ministry and differed from the specialised schools in training methods although they also provided upgrading and retraining. In addition, vocational training institutions run by private firms could receive prefectural approval to operate as specialised vocational training schools.

The general impact of the 1969 Act was that programmes offered

by the training centres became more diversified and the level of encouragement and support for private sector training was strengthened. Overall, the training choices available were more varied and flexible and the focus on continuous learning and relearning was better geared to the growing economy. However, certain factors began to affect the training structures. First, the continuing increase in numbers who stayed on at school, second the ageing of the labour force and finally the first oil crisis in 1973, brought new pressure for change in the state training structures.

As a result, two amendments were made to the vocational training law, one in 1974 and again in 1978. The primary responsibility of employers for providing adequate training for their workforce was now emphasised. In contrast, the role of the public sector concentrated on encouraging and supporting employers training and helping those in the labour market who had special needs. As regards training in the private sector, approved enterprises could be given state aid, such as the use of instructors, training centres and materials. In addition, the revised law aimed to foster private sector training by encouraging the establishment of private vocational training institutions to help meet the training needs of firms. The state system of skills testing, which had been set up under the 1958 Act, was further encouraged by the newly established Vocational Ability Development Association. The training of new job entrants was mainly left to industry and the main focus of public sector training was now the retraining of displaced (mostly older) workers and the upgrading training needs of those who were not adequately catered for by industry.

Further developments, such as the widespread application of micro-electronic technology and the continued growth of the services sector, created new pressures for updating the vocational training legislation. In addition the continued ageing of Japanese society and the increased length of time people remained in their jobs created further pressure for change. Another consideration was the increasing number of people working abroad in Japanese subsidiaries, along with the ever expanding needs of the foreign trade sector, both of which were considered when drafting the new legislation. The new 1985 law was called the Human Resources Development Promotion Law. Dore, Bounine-Cabale and Tapiola in referring to the title humourously point out that activities of dubious prestige in Japan are often thought to benefit from new

names. Notwithstanding this less than respectful side shot, they state that the new law marked a noticeable shift of state expenditure away from 'in the market','for stock' training towards training within the firm. We will now look at the present situation on public sector involvement in training, including the 1985 legislation.

WORKFORCE TRAINING POST-1985

The 1985 Act states that the development and improvement of a worker's skills is indispensable for their security of employment and the development of the economy. It also states that this development should be carried out systematically in stages throughout a persons working life. The Act improved the support available to employers to provide learning opportunities for their staff and the expectation was that leading companies would become the learning organisations.

The state's role now promotes and enriches training by employers and encourages them to facilitate their staff to undertake training and to become involved in the trade skill testing process. The state has also a role in helping workers who are unemployed or who wish to change occupation.

The Ministry of Labour has overall responsibility for public vocational training and trade testing. Inside the Ministry, the section dealing with this area is the Bureau of Human Resources Development. In order to ensure the involvement and cooperation of industry the tripartite Central Human Resources Development Council (HRDC) acts as an advisory body to the Ministry. However, it is worth making one brief point here. Japanese social partnership in the training area is not the same as Austrian or Swedish partnership, partly because Japanese unions are enterprise based rather than occupation based. The affect of this is that national and regional trade union structures appear to be different in nature and less in evidence than in Austria and Sweden.

The Minister of Labour formulates a national long-term training plan. The purpose of this is to encourage firms to become learning organisations so that they actively engage in human resource development, to improve public vocational training and the evaluation of training through such things as trade skill tests, and to promote the conditions for the development of ability throughout Japan. In addition, each prefecture formulates a basic plan for their

area in line with their role under the Ministry's overall plan. Employers are also encouraged to formulate their own company plan for the development of their staff and to ensure that learning opportunities are provided systematically to suit each worker's career development.

TYPES OF TRAINING

Article 8 of the Act lists the three types of vocational training as follows:[4]

- *Basic training* - is mainly for young workers such as lower and upper secondary school graduates to help provide them with basic work skills. It contains: (a) short courses for new employees for acquiring basic work skills; (b) general courses which take one or two years depending on the level of secondary school education; (c) special courses for the purpose of teaching skills necessary for highly skilled workers.[5] A person who completes a general course of a certain length or a special course can be classified as an 'assistant skilled worker' if they pass the relevant skill test following their training.
- *Upgrading training* - is geared towards those who already had basic training and who have a considerable level of work experience. The purpose is to update and improve workers' skills along with providing leadership skills. As with the basic courses the upgrading courses provide a wide range of vocational training for a large variety of occupations. These are divided into grade one and two certified skill worker training courses, mono-grade training courses, supervisory courses and skill upgrading courses. The first three courses can take anything from one to six months or one year by correspondence. The latter two are short courses taking only 10-12 hours or more.[6]
- *Vocational ability redevelopment training* or more simply retraining is for facilitating people who wish to change their job or to help the unemployed get work. This type of training is divided into: (i) short courses of 12 hours or more for those who wish to move to simple jobs with low skill requirements; (ii) job conversion courses for those moving to jobs with considerable skill requirements. There are about 190 such courses lasting six months and operating on a modular structure to allow various

starting times during the year.

TRAINING FACILITIES

The public vocational training facilities include the following:

Vocational Training Centres (VTCs) which have been in existence since 1958. They are set up and run by prefectures, cities and towns to provide basic upgrading and retraining. They can also help firms with staff training.

Vocational Training Junior Colleges, which go back to 1973, are set up by the Employment Promotion Corporation (EPC) to provide basic training and help firms with staff training. The EPC was set up in 1961 and, as well as establishing and administering training facilities, it provides workers and employers with training related finance. It is involved in setting up research bodies in the training and related areas and is responsible for the Institute for Vocational Training. This institute which was also set up in 1961 has as its main role the training of instructors and research into vocational training.

Skill Development Centres are set up by the EPC to provide retraining for the unemployed and those who wish to change jobs and also to provide upgrading training to the employed along with helping employers give training and skill exams to their staff. The Central Skill Development Centre was set up in 1966 and a second one was opened in 1980.

VTCs are by far the more numerous of the training facilities and there were 390 VTCs, 12 Vocational Training Colleges and 35 Skill Development Centres when the legislation came into force. In addition to these there were 18 VTCs for the physically handicapped.[7] Although all of the above training facilities except the VTCs are EPC facilities, prefectures may receive Ministry of Labour approval to open any of the other three types of facilities in their area. As regards the running of these facilities, Article 16 of the 1985 Act states that the head of a public vocational training facility shall be a man knowledgeable about vocational training. In most other OECD countries, the designation would probably be person. This is a small example of the dominant role of men in Japanese society.

As regards the nature of the curriculum provided by a VTC upper secondary, the Ministry of Labour provides a comparison between a mechanical engineering curriculum in a vocational school and a VTC. In the former the school this course takes 3,600 hours over three years and in the VTC (for group 1 and 2) it takes 3,200 hours. The high school spends 54 per cent of allotted time on general subjects in contrast to the VTC which only provides slightly over six per cent. In addition the high school provides 15 per cent on practical training whereas the VTC allots 69 per cent of time to this area.[8]

Those who want public training apply at a VTC or a public employment security office. Although courses normally start in April or October, other starting times are possible depending on the unemployment situation, etc. Some courses are free and some have fees for which trainees can apply for loans or an allowance. Depending on the type of course, the training facility examines the level of skill reached and provides a completion certificate. The shorter courses reduce the time necessary to take a trade skill test, and the longer and more advanced courses provide exemptions from various trade skill tests. For those seeking work after the training is complete some VTCs provide a job placement service in liaison with the employment security officers.

Public training and approved in-firm training is provided by a licensed trainer except for certain limited types of training. The number of such licensed instructors working in public training centres is around 7,000 which is approximately one fifth of the number attached to in-firm training courses.[9] Licences are issued to those who have: (i) completed instructor training; (ii) passed a ministry exam, or (iii) are acknowledged by the ministry to have the equivalent competence to meet requirements (i) and (ii) above. As we saw already instructors are trained by the Institute of Vocational Training.

TRAINING SUPPORTS

An important support structure to the public training system is the Research and Development Institute of Vocational Training which opened in 1978. This is the main body for vocational training research in Japan. It has two main functions. First, its development division carries out work on the updating of textbooks and teaching

materials. Second, its basic research division carries out general research on such areas as training, teaching methods and changes in industrial and social structures.

In regard to the former role, it should be noted that the Ministry of Labour stipulates that for effective vocational training instructors must use the textbooks and related materials which it approves - in all 476 textbooks and 285 related materials.[10] In addition, instructors often develop additional material of their own to supplement those officially recommended. This course material approval system has echoes of the centralised textbook approval system in the educational sector. Essentially it means that, in spite of the much larger level of approved vocational training carried out by the private sector and the somewhat disaggregated public sector training system with both its Ministry/EPC and prefectural training facilities, the control of teaching standards through the official teaching material system ensures, if nothing else, a reasonably uniform standard of training.

The other two elements of the standards equation, apart from the curriculum and the textbooks, are of course the quality of both the instructors and the system of exams or skill testing. Regarding the former nearly all instructors as we saw already must be licensed to teach an approved vocational course. It is difficult to gauge the quality of instructors other than to make the general point concerning the high quality of the Japanese education system which provides the Institute of Vocational Training with its student population. We have already referred briefly to the certification process of the training facilities and we will look shortly at the important role of skill tests in the vocational training area.

The 1985 law set up what was called the Central Vocational Ability Development Association which in turn can have equivalents at prefectural level each of which are members of the central organ. The purpose of this body, is to promote and support training in private enterprises by offering information and advisory services to employers to improve the efficiency of their training. It is also involved in skill tests and has the executive function of running the testing services for the Ministry. In this regard it prepares the test papers for each of over 130 or so trades.

SKILL TESTING

The Japanese system of trade testing was introduced in 1959 by the Ministry of Labour for the purpose of giving recognition to the skill level of the blue-collar worker. Part of the objective was to motivate workers to improve their skill and thereby improve industrial efficiency. Tests are also conducted by other departments such as the Ministry of Health for certain medical skills and the Ministry of Transport for car industry skills. However, the majority of tests are done under the auspices of the Ministry of Labour.

The administration of the Labour Ministry tests are the responsibility of the prefecture but the preparation of exam papers, etc. and their assessment are carried out by the Local Vocational Ability Development Association. Such things as the classification of actual testable trades and the setting and revision of standards are considered, however, at the level of a subcommittee of the HRDC.

In 1959 there were only five testable trades and this has since risen to about 140 by the start of this decade. However, not a lot of people take these tests. For 25 years after its inception only 2.8 million had taken the tests. This is not surprising given the work experience requirement and the high standards called for along with the work experience requirement - only 43 per cent passed the test during the same period.[11] However, there are also a wide variety of tests run by companies which add considerably to the overall significance of skill testing in the Japanese context. We will concentrate here mainly on the state testing system and refer briefly to the others at the end of the section.

Skill tests are normally designed to measure rather narrowly classified skills - for example, paper hanging, cloth sewing, well boring, rope processing. However, you also get some wider classifications such as landscape gardening, cooking and painting. There are only a few if any testable skills which correspond to a complete job. Mostly they correspond to components of a particular occupation or what could be termed skill elements which form part of a more complex job. This type of narrowly based skills test system can be partly, at least, interpreted in the context of the employer-job-employee relationship. Although this is something we will look at in more detail in the next section it is worth making a few outline points here. First, most workers in Japan tend to describe themselves as say Nissan or Sony workers rather than as a carpenter working presently in Nissan. In addition it is often the

case that workers enter a company with a high level of basic education and are trained and retrained for each different job they do. Thus the norm is somewhat different to certain other OECD countries where the new carpenter or plumber is employed along with their particular trade qualification for which they had perhaps a three year apprenticeship.

We can take, for explanatory purposes, two contrasting approaches to skill classification. One could be to treat a skill as having a narrowly defined range of activities. For example, a black and white portrait photographer would train only in taking black and white portraits. This type of skill classification could be termed a mono-element approach. In complete contrast we could treat a skill as having a widely defined range of activities. In this case we take the skill of photographer to include taking all types of photographs in all colour mediums along with film developing, camera technology, etc. This latter approach could be termed a composite approach to skills. Another example would be say a carpenter (composite) and a cabinet maker specialising in fixing early 19th century antiques (mono-element).

In a mono-element skill regime, skill testing will be more narrowly based and the certification process will reflect this. In a composite skill regime, skill testing will be broader and the certification process will be more occupation based. This latter regime, Dore and Sako calls 'standard packages' required for standard occupational roles which they say is essentially the case in Britain. Despite the arrival in Britain of the modular approach to training whereby say a photographer, may be taught modules in photography (in colour, black and white and filter), course technology, film processing, art appreciation, etc. they argue that in Britain these discrete elements are only modules of a larger whole and have little meaning unless they add up to a definable and conventional occupational role.[12]

An important aspect of the mono-element approach and the related testing system according to the above authors is that it gives firms much greater flexibility. Of course Japan has its share of whole-occupation certification. Like other OECD countries it has its exams for teachers, doctors, architects, etc. But it is in the middle and lower skilled area where the mono-element skill system and its testing procedures are particularly strong. Incidentally we will also see in the next section that even in some of the higher skilled areas

such as administration, management, etc. we do not find as strong a market in accountants, marketing managers, etc. as you find in many other OECD countries. This is partly because of the lower intercompany mobility and greater in company job rotation and in-firm training.

The test consists of a written exam which checks technical and other knowledge, including laws and regulations, related to the skill. It also includes a test of manipulative skills. For example, the test for welding aluminium covers a variety of activities such as welding with aluminium or titanium strip, pipe welding, edge-to-edge welding, etc. and complies with the highest of technical standards.

The successful candidate has certain rights or privileges. First, in the aluminium welding example a licence is given for three years assuming the worker is doing the type of work the test covered. Every third year a new test has to be taken to maintain the licence. In addition government and many private contracts stipulate that welding is done only by certified welders. Also some firms increase the wages of those workers who pass their test. However, the majority of such qualifications mostly confer prestige on the worker and are rarely required in order to do a particular job. Thus, rather than giving the worker a certified skill which they can use to try and get a better job on the external labour market, these tests operate mainly to raise skill levels within the firm and contribute to their advancement inside the enterprise.

A point of contrast between this Japanese qualifications system and others is the lack of a strong institutional link for many of the candidates. For example, a good proportion of vocational qualification candidates in Ireland and Britain take their course and exam in regional or technical colleges. Thus exam, course and college are strongly inter-related. This is not the case in Japan where in one study only 14 per cent of test candidates had taken some kind of course in vocational training school or equivalent and only 21 per cent had at sometime been at an upper secondary vocational school a relevant course. About 40 per cent had been at an ordinary general upper secondary and 20 per cent had been to university.[13] Thus the great majority of Japanese candidates take a test which grows out of their work experience and the test is used to corroborate skills they in fact had already acquired on and in relation to their job. This is in contrast to a vocational certification

system where the qualifications grow out of the institutional vocational education system and where the need to get a job or improve one's work chances plays a greater role.

In the Japanese vocational test system the educational institutions have much less impact on the qualification process than in many other OECD countries. In addition, professional associations in Japan have far less influence over the system than other places. In certain other OECD countries the role of the professional association in course development, exam and trade granting has declined in the last 20-30 years and has been taken over mainly by the educational or public sector training institutions. However, in Japan, the certification of competences is often done by associations of those who employ workers and by the state. Thus the competence of a worker is tested by the customers (ie.employers) or by the state.

STATE APPROVED AND OTHER TEXTS

The state is quite involved in the skill certification process without incurring much expense. It has done so in a number of ways. First, for example, by enacting that workers employed on certain jobs must have certain qualifications, for example where safety on health factors are involved. Second, they can legislate to recognise officially a certain body to run skill tests. For example, MITI used the first way to deal with skill training in car maintenance and the second way for the skills related to bike manufacture and repair. In the latter case MITI encouraged an association of employers within the industry to set up a non-profit organisation to run tests under its supervision. It has been argued that the purpose of some of these government initiatives is not always without self-interest. Such associations can, for example, provide interesting post-retirement jobs for the senior civil servants who helped create them - all part of what is called the 'ascent from heaven' for such officials.[14]

The aluminium welding example we looked at earlier was an example of a skill test which is operated by a trade association - the Japan Light Welding and Construction Association which was set up in 1962. Its membership includes 127 firms, six related associations along with 203 individual members (either employees of member firms or university engineers). Membership costs

IR£4,000 for larger firms, IR£ 450 for small ones and IR£ 35 for individuals. It carries out a wide range of activities including standards, technical information, research seminars and conferences. Its major activity, however, is its skill testing and certification system for which test fees have accounted for half of its operating expenses.[15]

Thus, various government ministries can give official approval to skill tests, which are run by trade and professional association of employers or employers' groups. For example, the Ministry for Labour has been approving tests conducted by non-profit organisations or associations since 1973 and in-company tests since 1984. As regards the latter there were a dozen approved company test systems for 41 job types by the end of the last decade.[16]

The first firm to be given official recognition by the Ministry of Labour was Nihon Denso, a large automobile parts manufacturer. The company was set up in 1949 and made a licensing agreement with the German firm Bosch in 1953. This contact was partly responsible for encouraging their own three year apprentices school in 1956 and all of the 140 first graduates took the first state skill tests in 1959. The process of taking the state tests then grew and expanded. However, the company was then put under pressure by the electrical/electronic trades who felt underrepresented in the list of state tests available. Nihon Denso had already been giving salary rises to those who passed the state test and the others who had no test felt the company should introduce an equivalent to which they could aspire. So the firm started its own test system in 1972 which by 1974 had covered every job. Today the company has a highly elaborate test system.

The approval of non-Ministry tests either by associations or private firms supplements to the government system and some of these approved tests have later been replaced when a state test was set up to cover the particular area. However, although the state certification and approval system is quite extensive there is a wide variety of other skills tests which are not state certified or approved. Ishikawa states that 61 per cent of firms with over 1,000 workers operate their own schemes of skill certification which they use, among other things, to maintain and improve the skill levels of their work forces.[17] An important aspect of company tests is that they are often open to workers from sub-contractor firms. Certain firms require that specific types of work should only be done by

those sub-contractors workers who have received the relevant skill certificate. This is done to maintain the quality of the larger firm's purchases so as to improve the company's competitive edge.

Assistance for private training

Section 2 of the 1985 Act states that the public vocational training facilities may assist firms by providing them with training and test facilities. They can also undertake commissioned training and release their instructors for use by private firms. The public training units try to keep close contact with nearby firms so as to help get the firm's cooperation for work experience and possibly also employment for those who have finished their training. This type of contact is also important for the Skill Development Centres especially in relation to their role in upgrading the skills of the employed. The formal training programmes in Japan are, as is the case in other OECD countries, provided by the public training bodies. However, in Japan these standardised programmes can also be provided by firms, groups of firms and other bodies under the classification of what is called 'authorised training programmes'. The most recent data shows that there were 1,135 authorised training programmes of which just 298 were operated by individual enterprises. The rest, equivalent to over 70 per cent, were provided by cooperative training organisations.[18]

The application for authorised status is made at prefecture level and is considered on the basis of standards established by the Ministry of Labour. This system of authorised training was introduced to help improve the level of training in private firms especially in smaller enterprises. Here, support is given to encourage training within the firm and between groups of firms. The authorised training facility can use the name VTC, Skill Development Centre or Vocational Training Junior College depending on the type of courses being provided. However, most of these approved courses appear to be initial skill-training. Subsidies for approved courses relate to supporting the building of training facilities, overhead and equipment costs and wage subsidisation.

In order to help the development of workers within a firm, the 1985 Act encourages firms to appoint a person in charge of human resources development. This staff member is expected to introduce

a company skill development plan, to counsel and advise workers on training and education and to liaise with the local prefectural Association of Human Resources Development. Since 1985 all prefectures have had service centres for human resources development. Each centre has a planner and counsellor who are involved in supplying (especially small and medium sized firms) information and advice on training, etc.

There are a wide variety of financial supports for training and skill development ,some of which have been mentioned already.

(i) *Subsidies for individuals.* These include training allowance for the unemployed, for the retraining of older workers and for the less skilled and casual workers.

(ii) *Subsidies for employers.* These include support for firms which, on the basis of a human resources development plan, provide training opportunities for paid educational leave, authorised skill testing, upgrading of staff, technology related training, etc. - these are classified under the skill development subsidies category. There is then aid to promote individual self-development, which again must emanate from a development plan and relate to situations where firms can be paid for courses which staff seek to do at their own initiative. Subsidies can also be provided to cover the costs of employing outside consultants to draw up syllabuses and test procedures. These tests refer to those outside the Ministry's list and the support is given to encourage their improvement and refinement.

Support is also focussed on the problem of small and medium sized firms diversifying into a new product area where the diversification means putting at least 20 per cent of turnover or labour force into a new industry. It can also count if the firm remains in the same industry but uses new materials or production methods or produces a product which is radically different from those used already. Support is also given as we saw above for approved courses and also to help firms construct training facilities and promote re-employment.

(iii) *Subsidies to local bodies.* A number of government supports

relate to the creation of a training conscious society and work force. These have a consciousness raising function by providing advice and information. The sort of activities or bodies which are funded here include subsidies to local government, chamber of commerce, etc. especially for funding the activities of the Vocational Ability Development Association in each prefecture.

Conclusion

The government's involvement in vocational training in Japan has gone through a number of distinct phases since the war. The early days saw the setting up of the Ministry of Labour and the impact of American training methods. By 1951 there was a move towards retraining craft workers with less emphasis given to the unemployed.

The 1958 law heralded a more active government role in training and efforts were made to create a comprehensive system of vocational training which now contained two elements: public vocational training and support for private sector training. The 1969 law introduced the system of approved vocational training which allowed firms to provide training to the same standard, in certain regards, as that provided by the public sector. This law encouraged a more flexible system of training geared towards the whole of a person's working life.

The legal amendments of the 1970s attempted to respond to the training impact of the oil crisis, and the continuous growth in technological change, by emphasising the main role of firms in training their workers and that of the public training bodies of retraining displaced workers and upgrading skill levels. The 1985 law saw a shift away from training a stock of workers for the market towards training within the firm. The encouragement of and support for private sector training had become by now more refined and detailed.

Thus, today's Japanese public sector training system is a rather unusual blend of public training and support and hands off encouragement of private training. Its training provision of this is relatively disaggregated in contrast to more centralised systems. This Japanese disaggregation relates not just to the fact that other Ministries are also involved along with Labour but also to the

division of training role between central and local government. Its support for private sector training is only really noteworthy in relation to the small and medium sized firm sector where its wide range of measures are exceptional by international standards. However, one of the more interesting aspects of the Japanese public training system is its ability to encourage private firms and their workers to improve their skills through the formation of training associations between firms, skill testing systems, etc, while at the same time not having to provide much, if any, state resources for it to happen.

Private Sector Training

We now look at private sector training and the first part of this section will briefly review its evolution.

EVOLUTION

Even as early as the end of the last century some visitors to Japan were struck by the way they ran their companies. For example, R.G. Smith (1856-1918) noted in his diaries that he was intrigued by how 'Japanese gentlemen confided their entire business to people in stations of lower rank than themselves'.[19]

The Meiji government at the end of the last century decided it was necessary to improve the skills of low and medium level workers. Although Japanese private enterprise had a type of apprentice system which the Meiji government attempted to develop, it did not, as we saw earlier, match the needs of the economy and in particular the demands of private companies which began to go their own way in regard to the skill development of their workers. We look at the development of company training from two perspectives. First, training in larger companies is examined and then in small and medium sized companies.[20]

LARGE COMPANIES

An important background point in regard to company training was the low level of compulsory education among factory workers at the start of the century. In 1900, when overall enrolment in compulsory education was almost 90 per cent, the ratio among

factory workers generally was less than 50 per cent. Among light industries, such as, textiles and printing it fell to below 30 per cent.[21] Although secondary level technical education nationwide had already begun with the 1894 Apprentice Schools Act, the public vocational education institutions did not meet expectations for three reasons. First, few apprentice schools operated as planned and the Vocational Continuation Schools (established in 1893) failed to expand. Second, industry was not enthusiastic about the type of training and standards provided by public technical education. It felt these schools should concentrate on middle-level operative training. Third, before the introduction and diffusion of the in-company technical training system Japan, as we saw, had an in-company apprentice system that differed from the usual type. As the old apprentice system within firms was replaced, a new type of training system slowly began to take its place. An important factor here was the significance attached to on-the-job training and experience within firms. In what follows it should be mentioned that in-firm training around this period was for the most part restricted to large firms.

In the early stages, in-firm training was found mainly in state run factories especially when new technology was being introduced. Here funds were set aside for training prior to setting up these factories. When new equipment or production methods from abroad were being introduced into such companies, foreign specialists first provided the training. Later on, a formal training system was introduced at more than five different bureaus within the Ministry of Industry where training was provided on imported technology. After the sale of state run industries to the private sector, the training system which had previously been provided under state ownerships now became a type of model to be followed elsewhere.

As regards particular examples of company training schools the Mitsubishi Technical Preparatory School (established in 1899) in the Mitsubishi Nagasaki Shipyard and the Young Worker Training Centre (established in 1910) at the state-run Yawata Iron and Steel Works were two pioneering schools. The example provided by these two, encouraged other firms in the same sectors to set up or expand company training systems. Although the training methods operated in both companies differed in detail they were similar to the extent that they provided a long-term full scale technical

training system during a period when the state system of secondary technical education was inadequate. Thus, the Yawata Training Centre and the Mitsubishi School provided a type of substitute role for technical school education. The former centre gave pupils ranging from 14 to 17 years of age a three year course whereas the latter school gave five years schooling for those over ten years who had already completed compulsory school. Also, the practical training provided in these companies was seen to have had an added advantage over any school equivalent. It provided better opportunities for learning the most modern techniques available. Most of Japanese industrial technology at that time was mainly imported by the leading firms from abroad.

In contrast to the above two examples, company education and training within the spinning and part of the mining sector complemented the school system. For those who had not completed compulsory school the company school provided them with a skill and also completed their formal schooling. A few of the large firms in heavy manufacturing were in a position to employ those who had already finished compulsory school and then provide them with company training.

Changes to this system developed between 1910 and 1920. During this period there was a rapid growth in industry, a move from light to heavy manufacturing and the mass production process in industry arrived. For these reasons the management of labour had to become increasingly sophisticated and organised. Large firms began to employ workers directly as difficulties with the older method of indirect employment of workers through foremen intermediaries became obvious. In addition, the quality and supply of skilled workers provided by the formal education sector remained rather weak. From the 1920s, there was a continuous shortage of skilled workers and the skilled labour market became so tight from around 1930 that firms poached from other firms. In addition, as we saw, the demand for apprentice schools did not match expectations and in the end they were subsumed into the technical school structure. The failure therefore of apprentice schools to provide a class of skilled workers, and the inability of the newly merged technical school system to do likewise, left a gap in the supply of skilled labour available to firms. According to some, the Japanese had not developed a clear understanding, nor a corresponding status, for a technician class in

the Japanese occupational structure.[22] Universities produced engineers, higher professional technical schools provided mid-level engineers and secondary level technical education low-level engineers. However, neither the position of the latter group nor the low level skilled operative was altogether clear. Despite the constant call for the creation of a technician class such a work strata was never clearly formed. A major reason for this was the lack of a suitable and well regarded technician training system by the formal school system.

As a result of the difficulties which the formal school structures had in supplying technical skills, firms began to become more involved in training so as to fill this gap. During the 1920s and 1930s, large firms developed new training structures for those who already had work experience. In addition, more emphasis was given to on-the-job training related to the actual work activities of operatives rather than off-the- job lectures. There was also an increasing need for more effective management of workers and out of this came the development of supervisory training. The actual work of a supervisor moved closer to the white-collar spectrum of skills. However, the amount of in-company training for white-collar areas such as engineers was still limited to a number of firms and industries and even up to the 1930s the main focus of company training was the blue-collar staff.

Over time, and especially after the War, the need for youth training in large firms declined in line with the increasing participation in the secondary school system. As this happened, the substitution for formal education role of large firm training was replaced by a complementary role. For example, the Young Worker Training Centre for boys declined gradually and in its place there was an increase in training of workers and supervisors. Also the Mitsubishi School was changed to a large scale worker school. In-company training developed in the 1930s and became more standardised but, as the decade wore on, it also became more influenced by the growing needs of the military sector. This, for example, led to the introduction in 1939 of a law which introduced subsidies for in-plant training of workers.

SMALL AND MEDIUM COMPANIES

Prior to the emergence and spread of training in large firms, and hand in hand with the decline in the factory apprentice system,

what Takguchi calls a 'training oriented labour market' developed.[23] Here, due to the determination of workers to improve their work knowledge, they embarked on a constant process of job movement within a particular industry. This type of 'learning by movement' system was to be found not just in large firms but also in small and medium sized firms. As the large firms improved their in-firm training structures, the small and medium sized firms maintained this itineracy system for much longer until other training replaced it.

Shinjiro, who surveyed machine factories in and around Tokyo in 1921, stated that there were two ways of training skilled workers.[24] First apprentices who were employed between 14 and 15 years for five years on average and trainees who started at 17 or 18 for about two years. Because the employment of trainees weakened the position of apprentices, the latter often resigned from their factory after one or two years without completing their service. They then entered another factory and took their exams with the hope of becoming a qualified worker. Indeed not just apprentices but also trainees frequently changed factories. This movement was motivated by the interest workers had in getting out of their term of service, where they were paid little or no wages, so they could get full wages. However, the actual transfer also provided a means of acquiring additional skills.

Workers' skills became personal assets which the owner was loath to pass on. In some cases a skilled worker or foreman would not show a production blueprint to lower staff and other workers did not often know what was being produced. Therefore, in such circumstances workers had to acquire skills bit by bit in different factories. The easiest way to do this was to move about. Thus, length of service and varied factory experience to perfect skills. The 1920s saw the level of skill based itineracy become less and less relevant in large firms as they developed their own training system and this resulted in this element of the labour market becoming more internalised. However, this was not the case with smaller sized firms thus creating a two track training system: in-house for large companies and itineracy for small and medium sized ones.

There were three characteristics of itinerant workers. First, to succeed as an independent labour operative one needed to have outstanding ability. Second, one was unlikely to be successful if one lacked managerial experience and had a poor relationship with

one's clients. Finally, it was important to get on well with one's initial employer to become independent. This itineracy learning system appears to be at odds with the Japanese tendency to share knowledge between workers at all levels in a factory - something which we already saw R.G. Smith refer to in the last century and something which we know to be one of the outstanding traits of the Japanese system today. However, itineracy appears to have been a historical phase where the desire to improve one's earnings and status was considered to be best served by individually building up one's knowledge as a type of saleable asset. As employment structures became less fluid, and firms saw the benefit of staff retention, workers were encouraged to stay on so firms could retain the benefit of their skills. Also improvements in the educational system helped eradicate the itineracy process. This was because more and more workers entering small and medium companies were doing so with higher levels of general education. However with time there was greater availability of relevant technical courses which workers could take to improve their individual skills.

AFTER THE WAR

After the second world war, much of the legislation was reviewed and abolished including the 1939 ordinance which subsided in-firm training. Despite the war damage to the industrial infrastructure, the skills and business acumen which had developed over the years were still available. Two important factors arose from the war in regard to training.

First, the impact of American methods on the training system as evidenced in such things as the training within industry approach and the job-relations-training which were both introduced from the US shortly after 1945. It is claimed that the use of these methods form the basis of today's quality circle/small group movement. In addition, efforts to encourage a more systematic training approach were promoted by the Japan Productivity Centre which was set up in 1955 with the help of US technical assistance and the Japan Industrial Training Association with help from American companies and the US military.

Second, the huge psychological impact on the national consciousness of defeat and a type of socially shared determination not to take it all lying down. Commentators, both Japanese and

foreign, continually refer to the national determination to improve and catch up with the rest of the world. This socially competitive drive is still very strong. According to Ohmae, people are afraid not to work in Japan because if they did the country would cease to function - and they would starve.[25] They feel that if the work ethic deteriorated the country would collapse. This factor has had an impact on all work related activities, including training. The excellence of the Japanese training can only be partly understood by tracing the details of its gradual evolution. It must also be considered against a war defeat determination to do whatever was necessary to make Japan strong again. We will now look at the private sector training system as it exists today.

Private Sector Training Today

Private sector training in any country is more difficult to get a focus on than public sector training. This is even more the case with Japan. Not only its training system but related areas, such as, industrial relations, employment structures, and wage system, are quite different in some ways than other OECD countries. Therefore, to understand better its private training system, we will treat these areas, as a complex mosaic. This contains an intricate training centre surrounded by an outer ring of related pieces. The mosaic's training centre can be cut out and viewed on its own but it is better to deal with the fuller piece as an integrated unit composed of related components. Thus, in looking at private sector training we will first review some of the factors related to training.

Related factors

Here we will look separately at a number of factors. First, we will look at what are called the three pillars of the Japanese labour market enterprise unions, lifetime employment and the wage system. These, according to the OECD, are not the result of some deep cultural wellspring in Japanese history. They are derived from economic and political processes of a fairly recent vintage.[26] Then we look at how the high quality of the education system facilitates the development of its human resources within firms.

ENTERPRISE UNIONS

Japan has an enterprise based union system. Each union's membership is based on one particular company with one such union per company. This was not always the case. At the end of the last century there were some job based unions although they were not long-lived. By the 1920s, some industrial unions had already emerged in the metal machinery sector. However, Japanese unions were not made legal until 1945 although their existence up to the war had become less unacceptable to the establishment.

The remnants of the pre-war unions were dissolved, and were replaced by industrial patriotic associations set up by each company during the war. These associations form the basis of today's enterprise union system. This system took time to develop and for a long period there was a considerable amount of labour unrest. The resolution of this conflict eventually led to the establishment of the enterprise union system which did not fully arrive until the late sixties and early seventies.

There is only the odd exception to the one firm, one union system. For example, Japan Airlines and Japan Railway have several competing unions. When a company has a number of subsidiaries there may be a union at each outlet but even here there exists a federal body which has strong central powers. Most union enterprise agreements state that section managers and higher are excluded from union membership. Secretarial areas are also often excluded. Collective bargaining effectively operates at firm level not at industry level.

If this enterprise based negotiation system stood alone, it would be unable to control the growth of intercompany wage differentials. The Shunto spring wage offensive or agreement operates to help reduce inter firm wage differentials. Interestingly, its evolution roughly matches in chronological order the development of enterprise unions. It began in the 1950s when the enterprise unions created committees to coordinate wage negotiation strategies. The countrywide settlement date of 1 April was tied in with the annual recruitment of school and college graduates (the school year ends in March and 1 April is the usual starting date at work). The Shunto agreement operated as a powerful standardizer of wage rises throughout industry. However, in recent times the Shunto process has been seen to weaken. The creation of Rengo (Japan Private

Sectors Labour Union Federation), however, might support or replace Shunto's ability to help standardise wages across industry.

Full-time union officials are often in effect on secondment from the company rather than being employed from outside. Thus some of the older company staff can have a service record which may include one or two years work for the union.

The level of unionisation in Japan, as we can see below, is much lower than that in UK or Germany, although higher than the US. It has noticeably decreased since the 1970s. The level of disputes has decreased strongly between the mid-1970s and the latter half of the eighties. According to the Ministry of Labour statistics, the number of disputes fell by over four times and the actual days lost by almost thirteen times.[27]

Table: 7.1: Estimated percentage unionised rate in four OECD countries

Country	1970	1985
Japan	35.4	28.9
U.S.	29.2	18.0
U.K.	49.8	49.8
Germany	35.8	41.9

Source: Sumiya (1988, 5)

In a survey done by the Ministry of Labour, 61 per cent of unions in Japan took up training and education issues with employers but in only 8 per cent of cases were union agreements reached on the area, with most of the time explanations being provided or discussions taking place.[28]

A possible related factor to the industrial union set up in Japan is the greater identification of workers with their company. Survey results show that over 85 per cent of regular employees in large steel, car and electrical machine firms felt that their company's welfare was connected to their own and this attitude was more prevalent among white-collar workers. In addition, more workers in Japan than America felt that the development of their company

was related to improvements in their own life. Japanese electrical machines workers were more inclined than their German, UK and Italian equivalents to feel that their own interests overlapped with their supervisors and managers. Related to this is the fact, outlined in another survey, that Japanese workers show a strong interest in their company. Here it was found that 80-90 per cent of all employees wish to be informed on their firm's policy and performance with 10 per cent stating they were well informed and 75 per cent that they were informed to some extent. The same survey shows that the three main sources of such information was company newspapers or magazines, morning meetings and information newsletters.[29]

As regards the views of companies, survey results show that US firms place most importance on consumers' interests (47 per cent), followed by shareholders' (45 per cent), then staff (9 per cent) and lastly society at large (4 per cent). In contrast Japanese firms rate staff first at (36 per cent), shareholders (22 per cent), consumers (21 per cent) and society as a whole (19 per cent). In the same survey Japanese firms were over one and a half times more likely than US firms to cut management earnings and benefits along with laying off staff if the firm were in difficulties. In addition, Japanese firms were almost twice as likely to restrict shareholder profits in order to retain employees.[30] All of which indicates a greater sense of common interest between management and staff in Japan than the US.

In view of the above, it is evident that few observers of the Japanese industrial relations system would identify it as a strong 'them and us' regime. In this respect, the economists concept of a neo-classical market system wherein labour and capital have conflicting interests is, at first sight, not as relevant in the Japanese context. If up to the 1960s the confrontational model would have been a useful source of analysis in Japan it seems to be of less use today. Many authors have referred in recent times to the corporate community model as being a more fruitful way of explaining things.

In addition to this, it is worth reflecting on the assumption among some academics, in particular certain economists, that behavioural patterns to given market developments tend to be uniform internationally. That this is not necessarily the case has only to be proven by a glance at the data in the previous paragraphs

where Japanese and US firms reacted differently to difficult trading circumstances. However, the Japanese firm can be considered to be just as efficiency and profit driven as its US equivalent. Where the difference appears to be is in the particular strategy of maximising efficiency and profits. The Japanese employer seems more likely to operate as if his staff were a more important competitive factor than is often the case elsewhere. This does not mean that he will employ more staff than others. On the contrary, on the basis of comparative productivity data, he may employ less. However, because of the investment in the quality of his labour he is more inclined to hang on to staff during a difficult trading period than appears would be the case in other OECD countries. In addition, the greater efficiency of his staff structures increases output and therefore overall employment.

We must however qualify the above matching of enterprise unions and the reduction in conflict. Union membership in Japan has now dropped to 25 per cent of the workforce leaving unions with only a segment of society for whom they negotiate directly. Additionally Chalmers states that over 80 per cent of the labour force are in the small and medium-enterprise sector. Therefore, since the sheer size of these firms make an enterprise union less feasible, the majority of such workers are left largely unorganised and unionization is concentrated mainly in the large firm sector. According to Koike, the greatest divergence between large and small firms is that workers in large firms are of a single type ie. white-collar workers with intellectual skills whereas small firms employ a variety of workers. Koike's concept of 'white-collar' means that although they may be factory operatives they tend to pursue a lifelong career path in a large firm like their white-collar colleagues.[31]

In regard to trade union bargaining, skilled, semi-skilled and craftsmen worker categories are not recognised categories for bargaining purposes in Japan. This contrasts with the situation in other OECD countries where skill definitions are often strongly contested or defended by particular groups. The training schemes which create skill types have always been firm based and open to change rather than tied to any country wide classification system. Hence Japanese firms have been able to tailor their training systems to the particular needs of jobs or job groups without having to deal with demands that those, for example, in electrical work be given

the nationally accepted electrician apprentice training rather than the company course. This reflects itself in the fact that each worker tends to be a company person who identifies with their company rather than solely an electrician who identifies with their profession.

LIFETIME EMPLOYMENT

At the turn of the century, according to Tatsuhito, there was over a 100 per cent turnover of blue-collar workers (ie.their average length of service in one firm was less than a year).[32] It was not until the 1920s that the origins of today's lifetime employment can be found in certain large firms and it did not begin to extend to blue-collar workers until after World War 2. Prior to the War Japan had for the most part copied its corporate system from the West. The large capitalist firms had been developed in the late nineteenth century as a result of the government's determination to catch up with the West. The big five companies (Furakawa, Mitsubishi, Mitsui, Sumito and Yasuda - called zaibatsu or conglomerates) took over the privatised steel, shipping, textile and other firms and ran them like in most other countries. Within these firms the usual employee hierarchy was also introduced.

It is argued that the present communal type corporation with its lifetime employment system was developed due to necessity in the aftermath of the War. Very many people were jobless and most factories had been burned to the ground leaving little except peoples' skills. Thus some of the pre-war zaibatsu managers, along with certain skilled staff, got together to set up small factories to produce basic products. These firms took on workers but were often unable to pay wages and often paid instead with food. These embryonic companies were more like communes than corporations. When any firm tried to run things in the previous way strikes, would erupt. The original communal firms had a profound impact on the development of, in particular, the large Japanese firm. This view sees the corporation as nothing but an assembly of people with each one a member (not an employee) of the firm.[33] Thus today's system of lifetime employment (and related elements such as the enterprise unions and seniority promotion) has been strongly influenced by the post-war communal type firm rather than by any grand strategy.

Kityama provides statistics on how the lifetime employment system spread between the 1950s and the late 1970s and these are summarised in the table below by referring to the proportion of what is termed standard or regular male employees. Such employees are hired straight after school or college and continue to work for the same company until retirement. This practice is based on the principle that the main responsibility of employers is to ensure permanent and stable employment for regular staff even sometimes at the expense of shareholder dividends and management earnings. When what is euphemistically called an 'employment adjustment' becomes necessary due to a serious problem in the market, employers only resort to dismissals as a last resort.

Table: 7.2: Trends in percentage of standard male employees

	All Industries			All Occupations			Manufacturing White-Coll/ Univ.Grads			Blue-Coll Univ.Grads		
	1000 + Staff	100-999	10-99	1000 + Staff	100-999	10-99	1000 + Staff	100-999	10-99	1000 + Staff	100-999	10-99
1954	38.4	21.8	17.8	31.0	23.6	18.4	69.9	47.7	34.2	21.0	17.1	15.6
1964	52.1	35.2	24.0	47.2	36.1	23.8	83.6	67.1	53.2	28.2	21.5	18.1
1978	72.8	52.3	30.8	69.9	53.7	29.3	91.9	82.4	59.3	39.9	30.5	20.6

Source: Ichiro Kitayama in Inagami (1983, 6)

The first thing to notice in the above table is the continuous diffusion of the lifetime employment system in all industries of all sizes during the above period. Second, the lifetime employment system is more widespread in the larger companies. This is something one would expect since large firms by definition would have more resources and greater capacity for stability even within a changing business environment. Yet the lifetime system has also steadily increased its penetration even in the smallest concerns. Third, this system is considerably more prevalent among white-collar manufacturing workers than among blue-collar staff. However, whereas it was in total 3.1 times more prevalent in

1954,this differential had fallen to 2.8 in 1978. This fall indicating that the slightly faster increase in the blue-collar area has already been closing the large gap with the white-collar area.[34]

Certain specialists have argued that the lifetime employment system, as a particular Japanese trait, is a myth. Koike, for example has suggested that the lengths of employment in Japan for various jobs is not very different from those in the US. In fact older workers in Japan have had less continuity in employment than their US equivalents. However, according to Whittaker the evidence suggests that employment fixity is more entrenched in Japan than in Britain.[35] Other commentators have in recent times cast doubts on the continued expansion of this system in Japan and have indicated the possibility of its contraction under the pressure of market forces. For example, Tatsuhito, referred to above, argues that it is now changing and is no longer appropriate in times of slower growth. A reasonable amount of evidence was put forward for this view since the middle of the 1980's. For example, the sudden spate of job advertising by major firms around 1984 and 1985 seeking, it appeared, to lure R and D staff from competitors. However, as it turned out the advertising succeeded in attracting mainly university researchers and returned emigrants from the US with very little staff moving from competitor firms. Another piece of evidence was the vigorous movement of dealers between financial companies in the 1986-87 period. However, this appeared to have been a temporary phenomena and related mostly to those with high earning profiles. A more serious factor has been the increase in the number of part-time workers over the years. These grew from 6.7 per cent of the employed population in 1970 to 12 per cent in 1988.[36] However, what is happening in the part-time sector is that it seems to be attracting in to the labour market a variety of people who were not there previously, such as middle-age married women, and these are often servicing the growing private services' sector and certain industrial areas.

The evidence indicates, in fact that the lifetime employment system has, if anything, become more entrenched in recent times, not just for men but also for women. For outside observers this may sound difficult to understand, given the need for flexible markets to deal with normal business cycle movements. Three points need to be made here. First, the lifetime system has two types of inbuilt flexibility - a large overtime buffer and ease of job

transfer. Regarding overtime, companies can react to cycles in turnover by varying the amount of work staff do, by reducing or increasing overtime. More importantly staff are willing to do a variety of jobs and work in a variety of areas and this is mainly because of the firm's capacity to teach new work methods and, as important, the staff's interest in and ability to learn new jobs. Second, when demand falls far enough, employers can ease the pressure by getting subcontracting firms and peripheral workers to take the brunt of adjustment. Finally, when growth weakens sufficiently, promotion opportunities for lifetime employees suffers and this must doubtlessly affect staff morale. In order partially to compensate for lack of promotion and related wage loss during a slow growth phase, continuous and where possible increased opportunities for learning and improving one's abilities, help maintain staff interest and enthusiasm and also better prepare firms for the upturn.[37]

The pressure which trade cycles places on the adjustment process within small or medium firms, and the real vulnerability of their structure, has obviously weakened the growth of lifetime employment in this sector. This affects other things also. As Kumazawa and Yamada point out, workers in smaller firms are usually more concerned with their acquired skills than those in larger ones. However, in spite of this fact the idea of skill as a power source in the factory is very weak in Japan. According to some there is no sharp dichotomy in the use of the lifetime system between larger and smaller firms. There is instead a spectrum. Definitely, smaller firms have higher staff turnover yet even these higher levels are lower than in most other OECD countries. The lifetime employment system is aspired to by all company sizes.[38] In the smaller firm sector it is just more often overridden by less manageable external factors.

The debate on the extent and viability of the lifetime employment system looks set to continue for the rest of the decade. Kaneko in a recent article states that this system needs critical revaluation and that it has been subject to serious academic criticism. However, after extensive analysis, he concludes that many aspects of it will remain and sometimes become more powerful.[39]

The lifetime system powerfully encourages the accumulation of a store of corporate knowledge because of its greater staff retention

capacity. Firms that suffer a continual haemorrhage of key staff in management, production, marketing or research, will be considerably weakened as a result. In contrast, firms which retain such staff can be considerably strengthened. Western companies, worried about skill outflows, have resorted to different strategies to reduce it. These include clauses in their employment contracts. Some however, have benefited from looking at a type of lifetime employment inducement as an alternative.

NENKO WAGE SYSTEM

The Nenko wage system is intimately linked to the lifetime employment system and is part of the quid pro quo for workers who are encouraged to be enthusiastic about their firm, happy to move location or job as the need arises and interested in learning and relearning throughout their working life. Nenko is the yardstick for determining wages and promotion and means both age/length of service(nen) along with a component for ability (ko). The latter is meant to act as a flexible element of a person's earnings which is tied to their productivity and the company's welfare. In affect however this bonus is looked upon as part of a worker's fixed income and usually it is only when the firm is in a difficult position that such a bonus is cut.

Koike again argues to the contrary by stating that there is nothing special about this system. He states that if we look at wage-earning profiles of blue-collar workers in Japan they are similar to white-collar workers in western OECD countries. However, we must still note the lack of a blue/white collar dichotomy in Japan. On this point others have argued that no distinction is made in Japan between manual and non-manual workers in regard to pay calculations whereas basic differences still exist in British factories. Pay in a Japanese factory is largely person-related, varying according to age, service, achievement and work attitude regardless of the type of work. In addition the pay system in Japan reinforces the long-term employment norm.[40]

The Nenko system became widespread from the latter half of the 1960s and its introduction was related to the idea of improving the efficiency of the employment system by more closely relating earnings to performance. In addition the intention was also to relate promotion to performance. In reality, however, large work

status differences do not occur within the same age and sex groups and the critical factor in determining wages has been the age of the worker. Similarly promotion is also constrained by seniority. Many companies recruit a special group of 'fast track' recruits from universities - the larger and more prestigious the company the more likely it is to attract graduate applicants from the top universities. However, even within this group promotion is still strongly determined by age.

A major training implication of the seniority aspect of the pay and promotion system is that it encourages older workers to share their skills with younger workers without fear that these same workers will be promoted ahead of them. In contrast IBM, to take but one significant US example, has provided a pay and reward system quite different from the Japanese seniority system. Here awards are an individual affair based on a one-to-one relationship between manager and subordinate. Fierce competition for promotion is the norm. According to Oliver and Wilkinson this competition is tempered by the need to display good team work ability. However, despite the IBM encouragement of interpersonal skills, the IBM system still encourages the individual accumulation and retention of skills. In contrast, one of the criteria by which a senior Japanese worker will be rated is how well he develops his assistants.[41] In addition, promotion of the senior worker often includes a transfer to another department where he will learn new skills, leaving him with even less reason to be wary of being replaced by his previous juniors.

It has also been argued that the Nenko/lifetime system helps improve the quality of corporate knowledge, especially that which comes from basic research. In firms where wage rises and promotion rely on success in basic research, employees will tend to be more attracted to doing development research where the risks of not making new discoveries are much less.[42] Basic research breakthroughs are less frequent and less certain than the continual improvements attached to development work. The point here is that the Japanese Nenko pay system is less harsh on those who do not make the basic research breakthrough although it still rewards, to some extent, the more successful researchers in this area.

It is possible that under a period of continuous recession the Japanese pay and promotion system could be considerably rejigged. However, it has survived the crises of the 1970s and 1980s

reasonably intact and its training implications can therefore be expected to continue.

HIGH LEVEL OF FORMAL EDUCATION

We have already spent some time looking at the educational system in Japan. Because of the internationally high calibre of graduates from both secondary and tertiary education, the work sector has a relatively high quality labour recruit to build its activities on. To provide just one example Jurgens, in itemising the reasons for Japanese success in car production, listed as the first of five reasons the educational level of workers.[43] He stated that the qualification level necessary for even the simplest production tasks in Japan, given its recruitment methods, corresponds almost with upper secondary school certificate. In addition, among its highly educated job applicants there is still a rigorous application process. In contrast, the recruitment of car workers at such a high educational level is inconceivable in the near future in America or Europe. The one possible exception to this, according to Jurgens, is Germany where the production structures are more likely to use workers with a high initial level of qualifications.

The high quality of recruits also allows Japanese firms to use what can be termed the system of 'delegated learning'. Here jobs related to a new technology area, for example, can be progressively delegated by engineers to maintenance staff and then by these to operatives. By this process they can ensure that the skills and knowledge necessary to most effectively use new technologies are spread widely throughout the company.

Recruitment, especially for medium and large enterprises which operate the lifetime employment system, tends to be more for a career than a job. The selection process tends to take more note of an applicants' ability to learn rather than any particular vocational knowledge they may have. Firms are concerned, even when taking on science or business studies graduates, that they have a good general grounding in their discipline as a solid basis for on-the-job training.

In-Firm Training

In a survey, which looked at the key issues that will require the

attention of Japanese managers, the need to concentrate on the development of human resources received the highest rating at 85 per cent. This was followed by improving marketing and sales (73 per cent) and new product creation (64 per cent). This indicates the strong interest Japanese managers have in developing their workers' abilities. The same survey then enquired how managers would rate the different components of their labour and personnel strategy. The results showed that the training and education element scored highest at 87 per cent with stabilisation of labour management relations lying down in sixth place at 35 per cent.[44]

DEFINITIONS AND BACKGROUND

Strictly speaking the term 'training' may not reflect adequately what nowadays goes on in this system - 'company education' is a more accurate term. Japanese companies always use the term education (Kyoiku) along with training (Kunren) because they are interested not just with improving a worker's skill but also his overall development. According to Holden, the crucial point to realise is that when we refer to Japanese in-firm training we are dealing with procedures and mechanisms for organisational development.[45] This is because the concept of training in a Japanese company has a strategic remit that goes well beyond much of our own functionally based Western training. To clarify this fact for western readers, observers of the Japanese system have classified such firms as 'learning enterprises'. This means a firm where everyone, from top executives to the most ordinary employees are not just given continuous opportunities to learn and relearn and to develop their vocational ability but are encouraged and indeed expected to do so. When Japanese state that their company is 'dojo' this means every activity in a company is part of the education and training of staff. In this type of company we have a wide variety of training mechanisms such as induction, planned job rotation, quality circles, courses, seminars, lectures, etc. Here everyone can expect to be a learner and in turn can expect to be a teacher.

Apart from the organised and structured forms of learning, much training also arises from opportunities provided by the normal flow of work. A British visitor, who landed in the northern port of Hakodate a few years, ago was surprised by a request by passport control to call at the immigration office when he got

ashore. There he was given a cup of tea while the senior officer explained the mysteries of his British passport to a junior. In another incident an American training in a Japanese firm thought he was being given special treatment when he was taken on what was clearly a learning visit with an older colleague who had to go to the local patents office. In coffee shops, department stores and factories you will often see one person carefully explaining a procedure or skill to another who is intently listening and watching.

Training in this system is helped by everyone being an efficient note-taker. A lot of learning is based on informally produced job specifications and procedure manuals which are meticulously written up by supervisors and used as self-teaching material by newcomers to a job. The old method of skill stealing, which was an integral part of the pre-World War I itineracy system of skill learning, has been turned on its head in today's Japan. In those days your skill was your labour asset and you jealously guarded it from others and worked to enlarge it by stealing knowledge as you moved from job to job. Nowadays you do not just sit and watch what your senior colleague does but you are encouraged to do so and you are often provided with a detailed manual of his work methods so that your job learning will be more effective and speedier. It is the learning efficiency and wide diffusion of knowledge which are the striking characteristics of today's Japanese learning enterprises. This learning can in certain contexts go beyond the usual remit in that it may also deal with character formation, attitudes, life guidance, etc. Hurley and Manton, in a review of a book explaining the Japanese vocational training system, appear surprised by the broad duties of the Japanese instructor to include character formation and personality development along with the usual vocational training role.[46]

Japanese firms do not rely much, or at all, on part-time study at educational institutions or public sector bodies. The apprenticeship system, as we saw, is to all intents and purposes gone. There is therefore neither a dual nor an alternating system in Japan today. Firms do most of their training internally Yet the total volume of Japanese training is large by any standards, in spite of which the actual training budgets or calculated costs are relatively low. This is partly because the costs of time spent on informal on-the-job training is often not calculated.

EXTENT OF TRAINING

Company training is quite widespread in Japan although the evidence shows that the level of training varies generally according to the size of the firm. A recent survey of Japanese firms shows that over 80 per cent of firms implement training procedures as shown in Table 7.3 below.

Table 7.3: Percentage of firms implementing training procedures

Firms by number of workers	% of firms
1000 or more	96.8
500 - 999	90.9
300 - 499	87.6
100 - 299	79.5
30 - 99	58.8
All Firms	81.0

Source: Ministry of Labour.[47]

This table also shows that the extent of training varies from almost 100 per cent in firms with over 1,000 staff to nearly 60 per cent in small firms of 30 - 99. An earlier Ministry survey found the same general result except that every firm with over 5,000 staff provided training.[48] The significance of training has also increased over the years as we can see in the table below.

Table 7.4: Percentage of firms with training role delegated to specific units.

Year	Dept.	Section	Small group	No designated staff
1970	7.1	31.9	22.9	38.7
1985	18.9	54.9	12.5	13.6

Source: Japan Federation of Employers Association and Japan Industrial Training Association.[49]

The table shows that the level of department and section responsibility for training grew significantly at the expense of the small group category. In addition the percentage of firms with no designated training staff fell dramatically during the 15 year period.

TRAINING OBJECTIVES

As regards the reasons why firms train, the data in Table 7.5 below indicates the range of priorities as they vary by firm size.

Table 7.5: Present and future training objectives by firm size

Firms by number of workers	Level up of usual operations	Improve quality/ service	Facilitate intro.of new tech.	Facilitate product./ sale of new goods	Training of specialists	Facilitate smooth job change	For employee promotion
5000+			% of Firms				
Present	69.1	20.6	17.4	12.4	16.3	7.8	39.4
Future	42.9	21.6	29.1	15.2	30.5	11.7	26.2
1000 - 4999							
Present	68.1	26.6	20.5	17.0	14.2	5.9	24.6
Future	42.4	23.2	25.4	19.8	31.5	11.7	21.0
300-999							
Present	69.1	27.2	24.2	19.7	16.8	5.1	10.1
Future	44.9	24.5	28.3	19.3	30.2	9.2	10.5
100-299							
Present	63.4	25.4	24.8	27.0	15.3	4.9	2.6
Future	45.2	24.7	29.4	23.7	21.7	6.2	5.3
30-299							
Present	56.5	27.9	22.8	21.0	13.8	3.9	1.3
Future	42.0	23.5	25.9	21.5	21.1	6.2	1.8
All Firms							
Present	59.0	27.3	23.3	22.4	14.3	4.2	2.5
Future	42.8	23.8	26.8	21.8	22.0	6.5	3.4

Source: Ministry of Labour, Survey on Employment Management.[50]

A number of points can be made on the above data. First, the largest proportion of firms replied that they used training to level up their usual operation. This appears to refer to a sort of general maintenance of workers' skills as a basis for day to day business. This priority is expected to contract quite strongly but will still be the most important one. There was no noticeable size differential here except for small firms. The next two areas were training to improve quality or service and new technology training with the latter expected to be the larger category in future. The training for employee promotion is noticeably size related with the larger firms doing a significant amount in this area and the smallest category doing very little.

As regards the various training groups Table 7.6 below indicates the level of priority attached to each group for all firms and for different sizes of firms.

Table 7.6: Present and future training priority groups, by firm size

Firms by number of workers	New graduate recruits	Middle level technical staff	Mana-gerial staff	Middle level production staff	Mid-career recruits	Middle level clerical staff	Older staff
			% of Firms				
5000+							
Present	65.2	19.5	65.6	20.2	1.1	13.8	0.7
Future	33.0	28.5	65.6	12.4	3.5	18.8	19.9
1000-4999							
Present	65.2	20.9	55.9	23.3	3.7	15.8	0.7
Future	33.5	25.8	58.3	22.4	4.5	20.4	4.4
300-999							
Present	61.1	27.2	45.0	28.6	6.6	8.9	0.3
Future	32.7	28.9	50.9	27.0	7.9	15.7	7.2
100-299							
Present	49.1	30.8	35.9	30.4	11.9	8.9	1.0
Future	30.7	29.8	42.8	29.8	10.7	12.1	3.8
30-99							
Present	29.7	32.0	27.3	31.2	17.0	7.9	1.5
Future	23.4	31.8	33.9	30.1	15.7	10.9	1.9
All Firms							
Present	36.4	31.2	30.8	30.7	15.0	8.3	1.3
Future	25.7	31.1	37.1	29.7	14.0	11.6	2.9

Source: Ministry of Labour, Survey on Employment Management.[50]

This data indicates that new graduate recruits are given training priority by larger firms and this trend weakens somewhat as firm size falls. This, however, is expected to reduce noticeably in the future. Middle level technical staff come next overall, due mainly to the statistical weight in the data of the smallest firm category. For all other size categories greater priority is attached to managerial staff which comes third in line overall. An interesting result is the extremely low training priority given by large firms to mid-career recruits in comparison to smaller firms. This appears related to the stronger lifetime employment system in the former and the greater inter-firm labour mobility in the latter. The training given to older employees is given the lowest rating but is expected to increase significantly in the larger firms. This expectation is probably related to the decision by larger firms to try and increase the productivity of older staff. However Amaya, after a rather laborious journey through human resources, survey results, concluded that many Japanese firms have not yet formed a personnel policy which could motivate middle-aged staff.

Methods of training

There are a wide variety of training methods, varying from lectures, seminars and courses to opportunist explanations by senior to junior staff. For the purpose of our next data source we will divide training into:

Off-the-job training (off-JT) within the firm to include company courses, seminars, etc. held by its training section within a dedicated training building or in some room or area within the company.

Off-JT outside the firm relates to training courses given by other firms or public bodies for staff of a particular firm.

Planned on-the-job training (OJT) relates to structured training on the job.

Assistance for self-development aside from paid study leave. This relates to support for such activities as courses, quality circles, etc.

PAID STUDY LEAVE.

To help identify the extent of these training areas we will refer to a Ministry of Labour study in Table 7.7 below.

Table: 7.7 Training methods by firm size

Firm size	Off-JT (within firm)	Off-JT (outside firm)	Planned OJT	Self development support	Paid study leave
1000 or more	96.8	62.0	69.5	66.5	9.7
500-999	92.3	62.5	51.5	42.7	8.5
300-499	89.1	62.1	48.0	42.4	8.1
100-299	71.9	55.3	35.1	28.4	8.4
30-99	52.0	41.8	20.8	19.1	7.8
All Firms	58.6	45.9	25.8	22.8	8.0

Source: Ministry of Labour Survey.[50]

The above table shows that off-JT within the firm is the most important category. It is noticeable that all training categories correlate strongly with firm size and this is particularly so with self-development support and planned OJT. An important training category in the Japanese context is the informal OJT. Although it is difficult to access data on this element of training, the table below provides us with some insight on this area.

Table 7.8: Training Methods by Occupation, Industry and Size of Firm

	O.JT only	O.JT & Off - JT with Emphasis on OJT	O.JT & Off - JT with Emphasis on Off-JT	Off-JT only	NONE
All Respondents	37	46	8	5	5
Classified by Occupation:					
Engineer	24	54	15	4	3
Manager	21	48	12	13	6
Supervisor	26	55	10	5	4
Clerk	43	47	4	2	5
Sales	33	53	8	2	4
Craftsman	48	41	5	2	4
Part-time	74	12	2	>1	12
Industry					
Construction	37	51	6	5	2
Manufacturing	40	42	9	4	5
Transport/ Construction	42	39	7	5	7
Trade/Retail?					
Restaurant	35	48	6	6	5
Banking/Insurance/ Real Estate	24	55	9	7	5
Services	32	48	9	4	6
N.of Employees					
1,000 or more	14	72	10	3	2
500 - 999	18	66	11	4	2
300 - 499	25	60	7	5	4
100 - 299	29	53	9	5	4
30 - 99	41	41	8	4	6

Source: OECD (1992) Appendix Table 4.

Note: Because of rounding up the data will not always total to 100 per cent.

OJT plays a very significant role in a firm's overall training operation. The smaller the company the greater its importance. It is also more important for craftsmen, part-timers and clerks and

less important for managers. The most important category however is OJT and OJT and Off-JT with emphasis on OJT. The larger the firm's the more significant this element.

Prior to considering the various types of training, we will look briefly at the nature of work and skills so as to inform our analysis of the different training methods. As we have explained, the Japanese understanding of skill formation is often wider than in other OECD countries in that it includes education, training and personal development. In this context it is a holistic concept that does not, according to Ford, fragment a person's development in terms of the vested interest of the various institutions.[51] Although our main concern here will be the training and education content of skill development we should remain conscious of the breadth of the Japanese approach.

A general definition of skill is that which contributes to an increase in productivity while labour and other inputs remain fixed. However, the content of the actual work or skill is understood poorly. This is because disciplines, such as economics, have focussed largely on the benefits of skills and the cost of acquiring and developing them. Koike and Inoki have developed their own method of analysing the content of skills which was based on a series of case studies of 16 workshops in 13 Japanese plants.[52] In these studies they observed the work on the shopfloor, and on the basis of this, identified those factors which helped increase efficiency. To clarify the nature of shopfloor skills they first defined the nature of work by dividing it into two categories:

(i) *Usual operations* This deals with routine, monotonous and repetitive operations. Because of their repetitive nature these routine skills are usually measured by the speed and exactness of the work.

(ii) *Unusual operations* This deals with both changes in work routine and problem solving. Changes in work routine are classified as variations in: levels of production, labour mix, methods of production and range of products. The ability to deal with such changes requires workers to know the operation and structure of the equipment and the flow and logic of the production process. This can be called an intellectual skill and demands greater ability by the worker

than handling usual operations.

Problem solving requires the ability to detect and diagnose difficulties and the capacity to rectify them. It also requires an understanding of the equipment and the logic of the production process. In addition it calls for a more detailed understanding than is needed for dealing with changes in routine in that it requires a fuller understanding of the equipment, the products and the production process. The ability to solve problems on the shopfloor requires a type of intellectual skill which is shared, at least partly, with technicians or engineers.

The objective for any firm is to handle both usual and unusual operations effectively. The lower down the work hierarchy unusual operations are handled efficiently, the better organised are the company's labour resources. In addition, a firm which facilitates the transformation of unusual operations into the usual category and additionally improves its workers' capacity to deal with a greater range and complexity of unusual activities, must be judged to be a more efficient skill developer. Such a firm could be classified as being one which has greater skill extension - extending the range of novel and unusual activities and thereby improving its labour productivity. The concept of usual and unusual activities can be applied to any area of activity including production, administration, etc. However, the level of detail and difficulty attached to usual and unusual operations can vary considerably. For example, the complexity of usual operations of a lawyer, fitter or kitchen porter will differ. Having looked briefly at the nature of work and skill development we now proceed to the methods of training.

ON-THE-JOB TRAINING

On-the-job training refers to formal and informal training on the job. Informal OJT relates to training by more experienced or senior staff which arises from opportunities presented by the flow of work. Here workers may query the more experienced staff or watch how they perform an operation. Alternatively the senior staff may use a favourable occasion to explain something to the worker. Informal OJT can also refer to the learning experience which arises when a worker moves from one job to another. Formal

OJT relates to the structuring of the above processes. For example, it may be arranged that a more experienced worker would brief the trainee at certain times of the day. In addition the senior worker could prepare notes or reports on certain activities which the trainee would use. The trainee could also be put through a formal process of job rotation over a period of time.

Table 7.7 earlier indicated that approximately 70 per cent of large firms, half the medium sized firms and a fifth of the smallest firms had a planned OJT system. Although the remaining firms do not have a formal OJT system they may indeed have an informal OJT system. Here Table 7.8 shows that 83 per cent of firms provided either OJT only or OJT and Off-JT with emphasis on OJT. Thus this method of training plays a significant role in Japan. We will look both at planned OJT systems for both shopfloor workers, graduates and potential fast-track employees.

In Koike's and Inoki's study of shopfloor workers, OJT training could take a number of forms. One method is to move workers through the major positions in a workshop along with the main jobs in related workshops. This broad OJT can have a variety of forms. One approach here is to create a type of career path. This structured rotation system starts with the worker doing the simplest job in a workshop, being promoted to more difficult jobs in the same workshop and then moving to jobs in the adjoining shops. In this process a more experienced worker is in charge of instructing the learner and is located beside him but must still do his own job. As the trainee's skill improves the senior instructor's role is reduced.

An important element of OJT is the study of significant problems. Here each worker writes a short report on recent problems and how they were solved. These are filed and discussed at meetings. Workers are also encouraged to participate in maintenance work. In many other OECD countries such work is mainly the responsibility of a cadre of maintenance staff. However, in Japanese shopfloors, trainee production workers at first observe maintenance staff and then proceed with doing the job themselves and eventually are able to do it largely on their own, although the more difficult maintenance work still requires the specialists. In addition to this, Japanese workers keep their equipment clean and solve routine machine problems. As a result of this, Japanese factories have been noted as cleaner, with their equipment in better

working condition, than in other OECD countries.[53]

For the training of graduates and potential high-flyers, foremen and technicians, structured job rotation is an important part of training, especially in the larger firms. First, there is induction rotation (say where new recruits spends a week or two in different departments over a period of 6 months or so). Second, we have long-term rotation. Following their first six months, high-flyers are given regular 18 months to two year rotations and the posts are picked so as to make up a suitable composite of postings. This long-term rotation system can be usefully considered in terms of Inagami's concept of 'width of career'. This refers to the range of jobs employees experience after entering a company.[54] Using this concept the on-the-job rotation dichotomy between shopfloor and potential senior staff can be contrasted as being one between a narrow and wide width of career path.

The idea of introducing job rotation into western firms developed in the 1960s and 1970s to help reduce work monotony and was aimed at the problems of motivation and absenteeism. In Japan, however, job rotation is, firstly, a means of multi-skilling a firm's labour force. Secondly, the experience of job rotation can help reduce employee resistance to new technology. Thirdly, as workers rotate from one job to another the primary link is with the firm and not the profession. Thus it limits the related interdepartmental friction which may evolve within any company and with which western firms are only too familiar. For example, purchasing can be envious of sales who in turn can be suspicious of accounts. In contrast to this, job rotation helps promote better inter-departmental communication and cooperation. A danger is however, if rotation is too extensive, it may be less easy to maintain and expand knowledge reserves in the various areas. This danger appears to be reduced by the relatively careful structuring of the rotation process.

OFF - JT

This type of training is more structured than OJT training and has the following characteristics:

- Learning within a group and normally conducted away from the work site,

- Fixed learning period using special training staff,
- Content is more theoretical than practical and
- Greater use of systematic evaluation.

Off-JT can take place in a training area or facility provided by the firm or by an outside group. As we saw earlier just under 60 per cent of all firms provide off-JT within the firm whereas 46 per cent provided it outside the firm. According to another Ministry of Labour survey, eight per cent of all firms had a training centre or internal training organization with the ratio at 68 per cent for large firms with 1,000 or more staff. In almost half of all firms an internal division (eg. personnel) was responsible for training matters.[55] The results of a slightly more recent survey is given in the following table which shows the percentage of training firms with a manager looking after training and those with a specialist training organisation.

Table 7.9: Training firms with a training manager or special training organization - by firm size

Firm Size	Training Manager	Special Training Organization
	%	%
Over 1000	99	61
500 - 999	96	39
300 - 499	95	24
100 - 299	86	18
30 - 99	69	14
All Firms	89	31

Source: Rodosho Minkan.[55]

Note: 81per cent of firms in the survey had indicated that they were implementing training procedures and these are classed as training firms in Table 7.3 above.

Of the firms which indicated they were training, 89 per cent had a training manager and 31 per cent a training organisation, and this overall result was mediated strongly by firm's size.

According to research, most off-JT is provided within the firm

although some is provided by outside agencies. The table below gives an overview of the relative significance of the various course providers for the different training groups.

Table: 7.91 Training groups and course providers

Training group	Course providers (% of firms using the method) In-house courses	Private sector training agencies	Correspondence courses	Customer (or parent) company course	Equipment makers course	Public sector training agencies	Special misc. schools	Universities
New Entrants	88	20	20	11	4	4	2	1
Managers	66	47	25	17	3	5	1	1
Supervisors	73	42	27	16	6	8	2	0
Clerical workers	73	37	31	11	4	5	1	1
Blue-collar	75	32	25	16	18	16	3	0

Source: Rodosho Minkhan.[55]

Note: The 'private sector training agency' group includes the big training bodies such as the Japan Industrial Training Association, Japan Management Association and Japan Efficiency Association, all of which are state sponsored bodies.

As expected, new entrant training heads the off-JT list and is provided mainly in-house. External training has become quite important, especially for managers and supervisors, with customer or equipment-maker courses providing a sizeable amount of training for a company's' employees.

Off-JT is a useful way of theorising and explaining practical experience. The off-the-job courses provided for shopfloor workers in Koike's and Inoki's study varied from two days to one week every few years. According to the study, unless shopfloor experience is systematised or theorised, intellectual skills cannot be established at the level necessary to allow workers to solve problems. A difficulty with the Japanese shopfloor training system is the inadequacy of these off-JT courses. However, the skill test

process provides a popular, though rather modest substitute, for a fuller OJT-training system for such workers.[56]

In most other OECD countries trainers are specialists who usually enter through the personnel area, have qualified in some relevant area and brought in previous experience related to their training post. In Japan, however, most companies have few full-time specialist trainers. In the vast majority of firms, training is provided by their own technical or managerial staff. In some Japanese firms there may be a small group of workers who will work as full-time trainers or course developers for two or three year job rotation stint. The idea of the specialist trainer whose career is spent training and then possibly managing trainers would be somewhat alien in most Japanese firms. The western approach stems partly from the penchant for specialists. It also seems to arise from the idea that the training skill itself needs to be developed as much as the information being provided.

The western view of the company trainer seems to be, at least partly, method based rather than content based. It is true of course that western trainers will often employ particular specialists with background experience to give a training course thereby strengthening the content element of their training facilities. However, the Japanese company training system is more strongly based on using the skills and work knowledge of the firm's own staff. This occurs even to the extent of rotating workers through the training department after accumulating a satisfactory level of work experience to pass on, or at least after having adequately rotated through enough sections to know who has useful knowledge to impart. It is interesting how the education system in Japan is so relatively academic and distant from the world of work, whereas its firm training system is so much less formal. In contrast, many other OECDs have education systems which try to bridge the school-work gap and which provide strong work related vocational courses. By comparison some of their company training systems provide trainers and training systems closer to the method rather than the content end of the spectrum. This is not to say that some Japanese firms, especially large ones, do not provide formal training structures. They do, as we will now see. However fewer of their trainers are professional career specialists.

Large Firms As we saw earlier, all firms with over 5,000 staff have training procedures and according to Table 7.3, 97 per cent of firms with over 1,000 staff. In general, the larger the firm the stronger the formal training structure. In addition many large companies have substantial training schools for craftsmen and technicians. The earlier pre-war company training centres focussed mainly, as we saw, on compensating for the low educational content of new recruits. Over the last few decades, the larger company training centres have concentrated on providing company related vocational training at upper secondary level to their new recruits. Due to the increasing educational level of the work force, several companies have in recent years been closing their technical colleges. These colleges provide off-JT within a fixed curriculum of related courses, specialised training facilities and formal evaluation or certification. We now look briefly at two of the larger training companies - Hitachi and Nippon Electric Corporation (NEC).[57]

Hitachi, which produces electrical equipment, employed around 160,000 at the end of the last decade. It set up an apprentice training centre in 1910. In 1959 the company established the general principles of Hitachi education so as to integrate the firm's objectives and philosophy of staff education with the various courses it then ran. In 1960 the company founded two Hitachi technical colleges to provide upper secondary graduate employees with an advanced technical training equal to third level. These two colleges had about 7,500 graduates per annum. In 1961 the Hitachi Institute of Management Development was the first Japanese in-house institute founded for management education. In 1970 Hitachi's Institute of Technology was established to keep up with advancing technology. In 1974 the company set up a training institute aimed at supervisors and in 1985 one for marketing and sales training.

NEC, another very large company, employed about 100,000 staff at the end of the last decade. NEC set up its own training department in 1936 in order to train skilled workers as specialists. In the early 1960s two year courses were introduced for skilled workers and since 1970 these were adapted for the training of third level recruits. Since the end of the 1970s a high quality two-year vocational training course was established to meet the demands of the new technology. This was for upper secondary recruits between 18 and 20 years of age who are given 50 weeks of

instruction (plus 1 week holiday and 1 week leave). The course aims to produce high quality skilled technicians who are expected to be the foremen of the next decade. NEC's and Hitachi's training centres are renowned for their high quality work both by Japanese and foreign observers.

A recent development among some large firms is to hive off their training divisions as independent subsidiaries, leaving only a small administrative staff in the parent company's training division. Hitachi has done this as has a number of other companies and it is expected the trend will continue. In some firms it appears to be a natural process of diversification and positioning of the firm in a possible growth sector. Normally, however, the target customer is confined to other related firms in the company's own trading group or keiretsu.

Small Firms The resources of small firms are relatively limited and understandably the level of training provided by them for their staff is correspondingly restricted. This fact is evidenced in Table 7.3 which shows that only 59 per cent of 30-99 employee firms implement training procedures in contrast to all firms over 5,000 employees. Of the 30-99 who did train 69 per cent had a training manager and only 14 per cent a special training organisation (Table 7.9). There are, however, offsetting factors which help compensate for the lack of resources which small firms can devote to the training function and which encourage training in even the very small Japanese firm.

First, the educational ethos of Japanese society and the training ethos of her large and medium size firms creates a powerful private sector norm which even the smallest of firms are not immune from. Although small businesses are more inclined to use the external labour market for the skills they need, they still reply, when asked, that they believe in training and are doing, or plan to do, a lot of it.

Second, the level of training done in small firms can be increased due to such firms being members of a group. These groups can operate at all levels from the very large groups to local arrangements between small trading outlets. The archetypal large groups were the zaibatsu or conglomerates. These were the powerful family-controlled groups which dominated the pre-war private sector. Following the war they were dismantled. However, over time the members of the group slowly moved together again

and they have now settled into a looser version of the original configuration. The six modern groups - DKB, Fuyo, Mitsubishi, Mitsui, Sumitomo and Sanawa are huge combines of commercial, financial and manufacturing activity. They have about 650 member companies, including the leaders of most industries in size, technology and prestige. They employ six per cent of the total workforce and generate 18 per cent of all company revenue and profits. However, zaibutsu are not the force they were in pre-war times and even today their supremacy is threatened by more efficient companies outside the groups. Firms such as Honda, Sharp, Sony and Toyota have been extremely successful without being part of a group. However, one should not assume that these latter companies have done it on their own without the advantages of stable and mutually beneficial business relationships. Many such large firms have established small vertically integrated groups of their own. For example, Toyota has a tightly structured group of 1200 parts producers and behind them 38,000 tiny background businesses.[58] The competition within this group is vigorous and ensures high levels of efficiency. The link between such large firms and their myriad small supplier is often viewed as being either disinterested paternalism or vigorous exploitation. However, the real situation is that the link holds benefits for both parties.

These 'parent' subcontractor links do not stem from some enduring Japanese group trait but have evolved due to circumstances. Subcontracting developed following the 1920s recession, when firms began to find that buying in some of the items they previously produced became more cost-effective. As time went by, more and more workers began to set up their own small manufacturing businesses. Many of the subcontracted sales at that time were on a floating or spot deal basis. This variable arrangement had its related problems of irregular work quality which eventually encouraged large firms to strengthen their relation with some of their more important subcontractors. The developing relationship between a large firm and subcontractors received a strong impetus from the military government's encouragement of the keiretsu or hierarchical trading groups so as to improve the efficiency of military production. Following the war, companies began reestablishing the keiretsu groups in the 1950s. Today they are an important component of the small firm landscape. Subcontracting accounts for about 70 per cent of

earnings in the smaller machinery sector and 50 per cent to 60 per cent in manufacturing generally.[59]

Because of the long-term nature of this relationship between the large firm and her small suppliers it is in the large firm's interest that her supplier are at the cutting edge of technology and production efficiency to ensure cost-efficient inputs. Thus the larger firms tend to take a keen interest in the research, development and skill capacity of her suppliers. For this reason, the passing on of new technology to the small supplier is normal practice. Large firms may also stipulate that certain types of operations be done by employees with certain skill levels. To update their skills the larger firm may, for example, second one of their technicians to a supply firm. They may also place some of the supply firm's employees as trainees at the firm's own training centre. Alternatively, the large firm may take them on secondment to familiarise them with some of its work methods. Thus it is not surprising that many of these small firms have made good use of their longterm ties with their parent and the opportunity this has provided for acquiring expertise. As a result, some of them have so effectively responded to the skill acquisition opportunities that they are now more accomplished in their area of specialisation than even their parent company.

Third, Japan has a number of thriving industrial districts where production is carried on by a large number of small firms which operate under producer cooperative structures. Part of this activity relates to cooperative R & D and training activities. Another type of small producer structure can occur among first-tier contractors of large companies. Such companies can set up a group structure within which training committees operate and these can then provide the basis for cooperative training work. For example, in Osaka each of the four leading construction firms helped one of its leading sub-contractors to set up a training centre for construction skills.

Fourth, associations of smaller firms or co-operatives which operate group training schemes can receive state aid. In contrast to the relatively low overall level of public sector expenditure in the economy, the support measures for smaller firms' training activities is quite extensive even by international standards. Support, not just by the Ministry of Labour but also by MITI through its Small and Medium Enterprise Agency, by the Ministry of Transport for skills

needed in the transport area and the Ministry of Construction for construction skills and so on. This type of support system is relatively new to Japan but one can expect a steady increase in training groups organised by, or on behalf of, small firms. This is partly due to the tendency of particular industries to locate in certain geographical areas. Second, it is influenced by the need among small firms to share the administrative burden of applying for these training grants and to sometimes meet the group incentives tagged on to some of the state training schemes.

Finally, the relatively high education level of recruits to even the smallest firms provides fertile ground for workers in such firms to be interested in self-improvement and learning. This is something which we now turn to in the context of all firms both large and small.

SELF-DEVELOPMENT AND GROUP ACTIVITIES

This third method of training has an important impact on the skill content of a firm's labour. It is not so much a training method as an area of worker initiated learning. The Japanese are voracious readers, though not all of what they read is of high quality. Newspaper circulation per head in Japan is the highest in the world. The high quality Yomiuri Shimbun is the largest daily in the OECD world and Japan's serious press is considered to be of quite a high quality internationally. As a result the average Japanese is better informed about the factors which affect their situation than the average European or American.

Much of the actual learning which goes on in a Japanese firm is done by individuals who have literally gone off and bought a book. Whether that book purchase was part of a reading list on a correspondence course or related to quality control circle (QC) work or was simply because the employee wanted to know more about an aspect of his or her work is not really important. The point is that the market for such literature is large. Whereas in many western nations bookshops tend to provide groups of books related to particular college or school courses, in Japan they will also sell large number of books which derive their demand from sources other than formal reading lists. These books are often aimed at the worried shopfloor worker or small group leaders who simply wish to get better results. One of the larger industrial publishers claim to

have sold 600,000 copies of its biggest QC seller. The two self-development activities we will look at here are correspondence courses and QCs.

Correspondence courses As we saw earlier in Table 7.91 correspondence courses were the third largest training provider after in-house courses and private sector training agencies. Another survey showed that a quarter of firms encouraged or required their employees to take correspondence courses with the level being almost the same for blue-collar as white-collar workers.[60] Few of these courses lead to any form of nationally recognised certificate. As regards courses which lead to formal state or public exams, most people taking these are doing so mainly because of employer, customer or legal requirement and one of the reasons they are so popular is that a sizeable number of such courses prepare people for the formal skill tests.

The private sector is just as important, and in technical areas more important, than the public sector in the provision of such courses and this is partly explained by the fact that colleges and universities tend to confine their correspondence courses to prolonged versions of the relevant full-time courses. A 1984 amendment to the Vocational Training Law, allows firms to receive a subsidy towards their contribution to their employee's correspondence course costs (one-third for smaller firms and one-quarter for the rest). The Ministry for Labour lists 1200 courses that are eligible for such support. In addition, these courses are in general moderately priced thus providing an additional reason.

Group Activities Along with training and correspondence courses, many firms encourage small group activities. According to a Ministry for Labour survey on labour-management communication, over 60 per cent of firms had such activities.[61] The most interesting and popular type of group is the QC circle. However, there are other groups including zero defects groups, workers voluntary groups, safety circles, suggestion circles, etc. Research indicates that the QC, small group participation method was the most popular learning or training method for shopfloor workers and joint fifth for foremen.[62] Although small groups are not set up for the purpose of formal training of staff they can noticeably improve labour productivity in that they can create a powerful group learning environment in which workers learn from each other and share the difficulty of dealing with the various texts

or reports in the area. In this way such groups create a type of self training group environment which forms an important element of skill-upgrading. We will now briefly review what they are and how they developed.

The origins of the QC circle is American and not Japanese. Deming and Juran, two of the earlier proponents of the Total Quality Control (TQC) concept, were invited to Japan in 1951 and 1954 respectively and their ideas caused a considerable stir within the Japanese business community. The TQC approach is that quality control should be an integral part of an organisation's operations, rather than that control of quality should be the work of a team of specialists. Control of quality should not be viewed as a separate activity but rather as a normal part of everyone's works.

According to the TQC method, the approach at all levels is to ensure a good quality product, not only for the final customer but also for each stage, in the production process. Thus, concern for quality starts the moment raw material enters the factory and continues through each stage of production including deliveries to the customer.

QC circles are an important element of the TQC concept. The QC circle phenomena started in 1962 with the publication of Quality Control for the Foremen. As a result of this book, a number of foremen and their workers set up QC circles. In the same year the Union of Japanese Scientists and Engineers established its QC circle headquarters and began to register QC groups so as to encourage and help spread the idea. A QC group operates by setting up a group of colleagues in a particular work area who decide to try and improve certain areas of activity. First, the group will learn a variety of techniques to help analyse operational problems such as pareto curves, histograms, scatter diagrams, etc. Next the group will choose a particular problem to analyse. They may then decide to learn something related to the problem by, for example, calling in a company engineer or seeking out some relevant manuals or texts for discussion.

The QCC and other small group methods provide a structure which increases employees' capacity to learn from each other. Through such groups some of the responsibilities for learning and problem solving devolve down through the ranks. This improves both the effectiveness and efficiency of workers. In addition, it reflects a type of empowerment which contrasts with more

hierarchical systems.

Commentary

From an international perspective the more interesting aspect of Japanese training is that which goes on in its private sector. The nature and level of public sector training and support does not attract the same attention as the Swedish or even the Norwegian equivalents. Her public sector training is relatively splintered across a variety of ministries and agencies without any strong coordinating or centralising agency. Nevertheless, its development is an interesting example of the absorption and adaptation of foreign ideas and methods following her defeat in World War 2. Since then, however, the evolution of the various public sector training schemes seems to be less influenced by foreign developments than by internal factors. An interesting area for consideration is the training supports for SMEs which is quite varied and has encouraged the increased use of intercompany training arrangements. Since these supports are administratively complex companies often combine their applications partly to share the administrative work load involved.

As regards private company training, it may seem that Japanese company training is nothing special since their training budgets are not very impressive. However, two points need to be made. First, their subsidiarity approach to training leaves more of the organisation of training at lower levels of the firm's hierarchy with a relatively less developed training superstructure. This is in contrast to the larger western firms which have a more structured and professional approach to training. This, however, often compartmentalised and removed from day-to-day operations. Second, the Japanese, as we saw, refer to training and education rather than just training. Both these components are strongly encouraged partly because of the longer time employment approach and, as important, the lack of fixed job niches and greater job rotation.

Another point of contrast has been the concern within certain western societies about what Braverman refers to as the 'deskilling' process. Here organisational and technological change is seen to be leading to a demand for lower rather than higher skilled staff leaving labour with less and less complex tasks to do. In contrast

Japanese firms are normally keen to recruit highly educated people and appear to be more concerned with the possibilities of a shortage of high skilled labour than with anything Braverman might hypothesise.

An important feature of the Japanese economy since the early 1970s has been its comparatively outstanding capacity to adapt in response to external circumstances. Among the advanced OECD countries its rapid response to the two oil crisis of the 1970s, the international recession of the early eighties and the exchange rate difficulties of the mid-eighties has indicated a remarkable flexibility. According to Shimada, this macroeconomic flexibility appears to have been generated mainly by the adaptability of its medium and especially large size corporations and in particular its labour market.[63] He states that this sector's flexibility more than compensates for the rigidities within such areas as the small family firm sector and the construction, distribution, agricultural and personnel services sectors. He identifies a number of features which gives the sector its adaptability. First, its capacity to adjust its employment. When companies have to adjust their staff numbers they transfer labour between workshops, plants or other companies. Their ability to do this hinges partly on the worker's capacity to be transferred and this is more easily done in a situation where workers have already had plenty of job rotation experience along with the experience of considerable firm learning. Second, the sector's ability to diversify its range of activities has been facilitated, in part at least, by the high quality and flexibility of its staff. He also refers to the spawning of a multitude of formal and informal organisations at various levels in society including groups of workers and how these operate to share information and understanding about the state of the economy and the condition of firms. Thus Japanese macroeconomic flexibility is considerably facilitated by the organisational flexibility of its corporate sector and this is most notably assisted by the quality of its workers and the learning and training mechanisms which ensure this quality.

Learning curve theory states that a worker's efficiency in a job plateaus after a period of time. As the employee becomes fully proficient in any task the possibility of learning more and thereby increasing the efficiency of doing the task rapidly diminishes with time. Where an economy fixes workers in particular job niches over long periods of time it can restrict their learning opportunities

thereby constraining the potential for improved labour efficiency. Learning curve theory operates in Japan as elsewhere. However, since Japanese workers tend to have more extensive job rotation and retraining structures, the learning and efficiency plateaus tend to be less restrictive in the Japanese context.

This point appears to contradict some aspects of the economists concept of specialisation. Here, according to the established view, organisations which facilitate greater specialisation will benefit from greater labour productivity. However, this idea is weakened by the learning curve theory in that workers who stay specialised may have put a ceiling on their productivity potential simply because of their task restriction. The traditional concept of specialisation refers to what we could call the honeycomb view of a firm's organization. Here each honey cell, corresponding to each job task, is fixed and specified and the static analysis of such an organizational approach would lead one to accept the benefits of specialisation. However, if one takes a dynamic view of the organization one might then take a slightly different line on specialisation. In a fluid business environment flexible organizations are essential. Therefore, the idea of specialisation, which disregards the organizations ability to facilitate job transfers and relearning, may give an inadequate view of today's competitive environment. The competitive beehive with the fixed job tasks is somewhat out of date. The efficient firm needs a certain amount of stability in the structure of job tasks so that it builds up adequate knowledge reserves. However, it also needs to facilitate job, work and product flexibility. It is here that the firm's capacity to have its workers move between jobs and take on completely new tasks gives it a competitive edge in today's fluid business environment.

To underline this last point Koike queried whether a study of problem solving in companies would reveal consistent patterns for which standard solutions could be found. However, his analysis of production led him to conclude that excessive standarization will reduce efficiency. He compares two different types of organizations from a division of labour perspective.

(i) *A separated system* which divides operations between two groups - usual operations for the production workers and unusual operations for the higher worker grades such as technicians or engineers. In this system the production

workers specialise in doing the routine and repetitive operations whereas the technicians and engineers look after the changes (in product mix, production methods, etc.) and the production problems.

(ii) *An integrated system* where the production workers look after both usual and unusual operations.

He argues that the latter system is more efficient for the following reasons. First, an integrated system has more workers capable of dealing with unusual operations and they can deal with these on the spot. Also where workers are continually responsible for just routine jobs their interest can wane whereas with an integrated system one would generally expect greater worker morale. As we move towards the end of the century it is likely that the realisation of the need for integrated production systems will grow in order to increase labour productivity and enhance corporate flexibility. In all of this the need for developing intellectual skills will be crucial.

Another way of thematically contrasting the Japanese corporate sector's skill formation process is to refer to the dichotomy between internal and external labour markets. The procurement of skills in the former complies, for the most part, with the Japanese corporate sector where recruiting is done mostly of young college and school leavers and staff are employed on a lifetime basis. Here skills are developed internally within or by the company and, if the firm closes down certain product lines and opens up others, it will normally retrain and transfer workers from old to new product areas. Thus job filling is done mainly from within the organisation.

The procurement of skills in the external labour market system occurs by filling job vacancies mainly from outside the firm. Here a major consideration when filling a job is the experience and qualifications of the ideal applicant. The potential of applicants for learning new job tasks is not at all as important a consideration. Thus in such a model workers moves freely between firms. Labour carries its skill, experience and qualifications like a badge which it displays to expectant employers so as to get a better remuneration than the one it has. Firms may also poach the skills it needs from competitors. In this system firms are not as inclined to invest heavily in a worker's skill development, except that which is

company specific, unless it can be sure to get a return on it. In what is being said above it is not meant to imply that the OECD world, apart from Japan, operates an external labour market skill procurement system in the private sector. However, much of the rest of the OECD world tends to operate nearer to the external labour market model and Japan nearer to the internal model.

There are of course some weaknesses in the Japanese system. First, it has been acknowledged that there are inadequate training facilities for middle-age and older workers and this problem will need to be addressed if labour shortages become more severe. At present in certain sectors there are four or five jobs available for each applicant.[64] Possibly the retraining of older retired workers may help here. Another difficulty is that Japan has fewer state mechanisms for reintegrating the young hard to employ groups than certain other OECD countries which often have to contend with greater levels of unemployment and therefore often provide more developed programmes for its alleviation. Finally, the various public sector training mechanisms could benefit from a more coordinated approach so as to avoid the possibilities of duplication and reduce the bureaucratic maze which faces the programme applicant. It might be difficult in the Japanese context to have a central agency accepted for this purpose but better inter-ministry coordination should be a minimum objective.

NOTES TO CHAPTER 7

1. See Ishikawa (1987)p.35 and for Ishikawa's earlier reference see Cantor (1985)p.72 which apparently has its original source in reference number 3 of Cantor (1984).
2. See McCormick (1989)p.139.
3. See Dore, Bounine - Cabale and Tapoiola (1989)p.53.
4. These three approximate categories below were already detailed in the 1978 revision of the Vocational Training Law - see APSDEP (1982)p.278-281 and OECD (1976)p.16 and 17.
5. Special courses can take from 6 months to 2 years and include around 180 standard training courses (covering such areas as horticulture, boiler making, electric cable casing, aircraft manufacture, bicycle repair, weaving, Kimono sewing , bookbinding, confectionery, civil engineering, port loading, office work, nuclear power technology and so on).
6. There are about 120 grade certificate courses ranging from casting, ship equipping, printing, slating, industrial packaging and so on whereas there are less than 20 mono-grade courses including injection moulding, machine noodle-making, industrial washing, etc.
7. See Ishikawa (1987)p.30.
8. See Ministry of Labour (1989)p.27 for the full pie chart.
9. The data is based on the public/ private instructor ratio in Ishikawa (1987)p.15 and the more up to date Ministry of Labour (1989)p.29 instructor figure in public training facilities.
10. See Ministry of Labour (1989)p.30.
11. The figure of 140 trades is based on the Ministry of Labour (1989)p.55-57 figure for 1988 and Cairncross and Dores (1990)p.29 assessment that new tests are added at the rate of 3-4 per year. See also Ishikawa (1987)p.18.
12. See Dore and Sako (1989)p.133.
13. See Dore and Sako (1989)p.128.
14. See Dore and Sako (1989)p.125.
15. See Dore and Sako (1989)p.115.
16. See Ministry of Labour (1989)p.65.
17. See Ishikawa (1987)p.19.
18. See Ministry of Labour (1989)p.48
19. Quoted in Holden (1990)p.41.
20. The following benefits from material provided by Sato, (1987) Iwauchi and Sasaki (1987) and Takaguchi (1987).
21. See Iwauchi and Sasaki (1987)p.195.
22. See Iwauchi and Sasaki (1987)p.198.
23. See Takaguchi (1987)p.216.
24. Refers to Kitazawa Shinjiro's survey of skilled workers in the machine industry in Tokyo published in 1924 and referred to in Takaguchi (1987).
25. Se Ohmae (1989)p.229.
26. See OECD (1989)p.3.
27. See Table 3 in Sumiya (1988).
28. Referred to in Inagami (1988)p.25.
29. The above survey results are referred to in Inagami (1988)p.20-21.
30. This survey result is reported on by Inagami (1988)p.6.
31. See OECD (1989)p.7, Chalmers (1989)p.47 and Koike in Kumazawa and Yamada (1989)p.105.
32. See Nagaya Tatsuhito *Labour Management Relations*, International Society for Educational Information, Facts about Japan, (late 1980s no date).
33. See Ohmae (1982)p.217.
34. These calculations are based on manufacturing totals in the original source.
35. See Whittaker (190)p.20-22.
36. See Takanashi (1989)p.17.
37. See Dore et al (1989)p.56-64.
38. See Kumazawa and Yamada (1989)p.107 and Dore and Sako (1989)p.110.
39. See OECD (1992,d)p.6-7 and p.40.
40. See Whittaker (1990)p.22, 78 and 79.
41. See Oliver and Wilkinson (1988)p.73.
42. See Koike (1990)p.30.
43. See Jurgens (1989)p.207.
44. See Amaya (1990)p.1.
45. See Inoue (1985)p.50 and Holden (1990)p.244.
46. See Hurley and Manton (1986)p.11.
47. In Cairncross and Dore (1990)p.12.
48. Ministry of Labour (1984) *Survey on Employment Management*, quoted in Ishikawa (1987)p.21.
49. In Cairncross and Dore (1990)p.13.
50. Tables 7.5 to 7.7 in Ishikawa (1987).
51. See Ford (1987)p.269.
52. These were published in 1986 and 1988 in English and are referred to in Koike (1989)p.29.
53. See Saha (1987)p.14.
54. See Inagami (1983)p.8.
55. Tables 7.9 and 7.91 in Carincross and Dore (1990)p.11-12.
56. See Koike (1989)p.6.
57. For further information on Hitachi read Tanaka (1989).
58. On zaibatsu see Tasker (1987)p.306 and 312 which provided the above data.
59. See Cairncross and Dore (1990)p.17.
60. Ministry of Labour Survey referred to in Cairncross and Dore (1990)p.15.
61. Ministry of Labour (1984) *Report of Survey on Labour-Management Communications.*
62. See NK survey, reported in Dore and Sako (1989)p.89.
63. See Shimada (1989) passim.
64. See Shimada (1990)p.8.

8 AUSTRIA

Background and Education

Austria has a relatively small population and a medium to low population density. Of the five countries we study it is the least wealthy and on a GDP per capita basis is around the fifteenth richest country in the OECD. At a little over half of its employment in the services sector Austria ranks about twentieth in the OECD and as regards size of agricultural employment to GDP it has a slightly larger agriculture sector than Japan. On the basis of current government receipts to GDP it has a reasonable sized public sector, at around eighth in the OECD. Lying as it does in the centre of Europe and being a small economy Austria is quite reliant on foreign trade with imports and exports equal to over half of its GDP.

Table 8.1: Austria - Basic Data

Population 7.62m	Area 84,000 km^2		Density 91 per km^2
Total civilian employment (TCE) 3.34m	Sectors	A: 8.0	
		I: 37.0	
		S: 55.0	
GDP p.c. $ 16,603	**Government Current Receipts		46.1
	**Exports + Imports		56.5

Sources: OECD (1991,a) and Landerbank (1988)

* %TCE

** %GDP

Employment

In 1973 along with Switzerland and New Zealand, Austria at 0.9 per cent unemployed was the envy of the OECD world. This figure, at that time, was a quarter of the OECD average. Its unemployment growth between 1973 and 1984 was the fifth lowest after the other countries in this report. Although her recent performance at three per cent has drifted slightly from her previous excellent performance, her 1993 figure will, according to the OECD, still leave her at fifth lowest and this includes the very low figures for Iceland and Luxembourg.[1]

In looking for some of the roots to this full employment approach we should refer to the traumatic experience of the internal conflict of the 1930's which led to civil war. The bitter experience of this and the war occupation helped to develop a consensus on many topics, and one of the major ones here was to ensure work for all. Stadler looks further back for the origins of the Austrian approach. He argues that the egalitarian reform efforts in the last century of the liberal bourgeoisie, the Christian anti-capitalism ethos and the particular variety of Austrian Marxism, all played a part. [2]

To find more recent factors in Austria's low unemployment, we note that an OECD study of integrated social policy in Austria states that there is only one societal goal clearly defined. This is the achievement of full employment. It states that there is general agreement among the social partners that unemployment should be prevented. Moreover, it is believed that it is easier to stop unemployment increasing than to reduce it once it becomes established.[3] The Federal Chancellery also states that the strong social partnership in Austria was most likely due to full agreement on certain fundamental questions by the partners. Full employment was the main objective mentioned in this context.[4]

The Labour Promotion Act was introduced in 1968 to contribute to 'achieving and maintaining full employment and preventing unemployment' (Article 1). To implement this, the Ministry of Labour and Social Affairs is charged with helping to maintain full employment and prevent unemployment. The Ministry must pursue an employment policy in keeping with current conditions and each year agreement is reached with the social partners on a programme which sets the guidelines for employment policy.

The Austrian social partnership model has a high degree of centralization. It is one of the few international examples where co-determination, at a level higher than the enterprise seems to have taken priority over the enterprise level. Ireland, with its two recent national programmes, now joins that list, although its social partnership is relatively less established and not as structured. Partly as a result of how it is organised, it is also argued that the Austrian economy is one of the most stabilised, predictable and controllable national economies in the OECD.[5]

Other reasons for low unemployment include a fiscal expansionary approach in the 1970s, although as with other low unemployment countries, she pursued a restrictive budgetary approach in the 1981-82 period. In contrast, however, to some of the other low unemployment countries, the effect in Austria of Swedish type labour-market policies in the 1970s and early eighties was insignificant. The most recent data on this shows that expenditure on active labour market programmes amounted to only 0.28 per cent of GDP in Austria in comparison to Norway and Sweden at relative levels of respectively three and six times that amount. An additional factor is the harsh immigration controls adopted by Austria which would not have been possible if she were in the EC. Another factor to be noted is that Austria's labour costs have increased by 14.5 per cent less than her trade partners since 1977.[6]

Background to Education and Training System

Education is held in much higher esteem than wealth in Austria and there is considerable prestige attached to having an education. In addition, it is considered an end in itself and more than elsewhere it would seem that it improves social status. On this very point Budzinski suggests that Austrian society can be considered a status society in the Weberian sense rather than a class society in the Marxian context. She argued this on the basis that there seems to be less of a class struggle in Austrian society and more a striving for titles, influence and prestige. Thus it is a status society based partly at least on qualifications. A recent report submitted to the social partners, and agreed by them, makes the point that the importance attached to the question of qualifications in Austria is indicated by the fact that this rather narrow topic was worthy of special study by the social partners and the government.[7]

Complementing this is a lack of conflict over the distribution of income. It is rather doubtful, an OECD study group on Austria argued, whether there is in Austria a majority of people in favour of levelling income. This, in many ways, relates to the desire at all costs to avoid disturbances and strife. As a result, the earnings pyramid has been very stable over the years. In addition, Seidel argues, Austria is one of the few countries where an institutionalised incomes policy has been relatively successful over a long period of time.[8]

A report on the education system stated that a marked feature of Austrian life is the strong support for a hierarchical ordering of occupations and ranks. To emphasise further what this reflects of the Austrian psyche, another study group some ten years later made the related point that the labour market, where all these qualifications are to a large extent turned in, puts a great deal of emphasis on certificates or qualifications based on preparation for particular occupations. In this context training is viewed as a very important factor and according to Schedler human resources and their quality are more important to the economy than other inputs.[9]

Some observers in trying to identify the cause or wellspring of the relatively stable Austrian economy have agreed that their education and training system has a large role to play. The Austrians themselves are not slow to recognise this critical point in the planning of their society and economy. Economic competitiveness can only be maintained and improved, if the qualifications of the population are developed and applied in the best possible manner.[10]

EVOLUTION AND ORGANISATION

The Austrian education system has a long and distinguished history. Some of today's institutions are among the oldest in Europe - the University of Vienna was founded in 1365 and the first vocational schools in 1675. State involvement in education began in the latter half of the 1700s. Public schools were introduced in 1774 and it was enacted that compulsory education should cover six years, though this requirement was not fully implemented. Today's Austrian system was significantly influenced by the liberalism of the latter part of the 1800s. This period saw the setting up of a variety of middle-level educational institutions (in

Salzburg,Linz,Vienna,etc). These produced skilled labour for the new manpower needs of the industrial and commercials sectors. In 1868 an act established state authority over education. The church continued to have control over religious schools.

The primary schools act of 1869 provided a uniform school system and in its basic concepts is still in effect today. The Act extended compulsory education to eight years and established intermediate schools. When school fees were abolished later on, illiteracy was significantly reduced. By the time the war had started in 1914, the Austrian system included new secondary schools, technical schools, universities and commercial colleges.

The two largest political parties, the Austrian Peoples' Party (christian democrats) and the Austrian Socialists Party(social democrats) formed a coalition government immediately after the Second World War ended and stayed in power until 1961. The former party draws its support from the employers and rural farming population and the latter mainly from employees. From the first formation of this new government negotiations were initiated to establish a new school system. Because of the sharp differences in perspective between the two coalition partners it took many years to get agreement. Two senior educationalists, one from each party, eventually worked out a compromise which led to the 1962 legislation which was passed in parliament by a large majority.

The legal foundation for today's educational system is this 1962 legislation. It states that educational laws are classified as constitutional matters and any amendment requires a two-thirds majority in the lower house of parliament. Thus alterations to the school system can only be implemented if they are supported by a large majority of the parliament and every educational reform is a forced compromise between the two great parties.

This constitutional requirement on educational matters is to say the least unusual in the international sphere. It has been criticised by such specialists as Gruber and Anweiler who consider it to be an indication of Austria's fear of uncertainty, its desire for predictability and its indication of a status schooling system. Its slow approach to educational reform has been contrasted with the Scandanavian method of 'rolling reform'. However, it is argued that a relatively unchanging system is more open to evaluation than a more chameleon-type structure which might escape proper analysis.[11]

The Federal Constitutional Act of July 1962 outlined the role of the federal and provincial authorities in regard to education. This Act formed the first step in the legal reorganization of the education system. The Schools Organization Act in 1962 provides the core of the 1962 acts on education in that it provides an overall classification and regulation for most types of schools. The education system has continued to develop since the early 1960's through a variety of amending acts and regulations.

Today, the two central education authorities are the Federal Ministry of Education, Arts and Sports, which is responsible for education and training generally, and the Ministry of Science and Research, which looks after the universities and colleges of fine art. The former ministry also looks after the administration and inspection of schools in the nine provinces. The centres of local government in the nine provinces can pass by-laws and allot funds for the maintenance of certain categories of schools. Attached to the education ministry are a number of important advisory bodies which provide the ministry with reports, studies and so on. Among these are an advisory board for project evaluation which is the important consulting body for pilot projects.

Education System

In this section we look at upper secondary, tertiary and adult education. First, however we will review compulsory education.

COMPULSORY EDUCATION

In Austria compulsory education begins as a rule after the child has reached six years of age and lasts for nine years. Children of six attend the primary school for four years or so. Except for special schools (ie. for handicapped), there is no differentiation at this level and the aim is to provide a common elementary education. At 10 years of age the following options exist:

(i) Basic secondary school (Hauptschule-HS) provides a general education over a four year period. After an observation period (8-10 weeks) pupils are attached to one of three achievement groups in the following subjects - maths, German and a foreign language. The first

achievement group is conducted on the same level as the lower secondary group below.

(ii) Lower secondary school (Allgemeinbildende hohere Schule-AHS) provides an in-depth general education and is the more academic element of the secondary school options.

(iii) Upper primary school (Volksschuloberstufe-VS) occurs for those aged 10 to 14 years and is conducted only in certain sparsely populated areas. The curriculum is based on the basic secondary school structure.

Admission to the basic secondary school depends on a pupil's interests, talents and abilities. Almost 70 per cent of pupils leaving primary school transfer to basic secondary school making it the most popular choice. By contrast almost 30 per cent of pupils leaving primary school transferred to lower secondary. Admission to lower secondary school occurs without an admission test which was suspended in 1971. Finally, admission to upper primary school is only allowed if attendance at one of the other schools is not feasible because of distance. This category, at only 0.04 per cent of transfers, is statistically miniscule.[12] However, from a regional policy perspective it still has some small role to play. At 10 years of age the above three transfer options force a certain amount of early decision making on the young pupil and his parents and thereby begins the process of educational separation which will impact on his later career options.

Basic secondary and upper primary school finish at 14 years of age when the pupils reach an even more critical decision point. At this stage pupils must do one more year of schooling to complete the requisite nine years of compulsory schooling.

UPPER SECONDARY

Upper secondary school begins at 14 years of age and there are four types of school to choose from:

- The Gymnasium which emphasises classical and modern languages.
- The Realgymnasium which emphasises languages, geometry and science and also operates as a continuation programme for basic secondary school leavers.
- The Wirtschaftskundliches Realgymnasium which emphasises home economics, nutrition, environmental studies, etc.
- The Oberstufenrealgymnasium which was given a statutory basis in late 1989. Here pupils are able to chose what subjects they wish to take so as to match their abilities and interests. These electives constitute either (i) greater in depth instructions in material already covered by their compulsory subjects or (ii) other subjects.

In 1993 the new Austrian leaving exam or matura for academic secondary pupils begins. Here the pupil has to write a scholarly paper which is tutored by the teacher. Part of the preparation for this new matura is the expansion of the school library system to support pupil research.

There is no intermediate academic school at the upper secondary level in Austria. Those pupils who have completed the basic secondary school at 14 years of age have to change track. They either move up to the academic secondary school system, pick one of a range of technical and vocational colleges, which operate at medium or higher levels, or else provide apprenticeship training.

PREVOCATIONAL YEAR

In Austria apprenticeship training does not begin until the pupil reaches 15 years of age. If, therefore, the 14 year old student does not attend the medium or higher technical and vocational college, upper secondary or upper primary school he must complete his compulsory schooling by taking a one year prevocational course. The purpose of this year is to strengthen a pupil's general education so as to prepare him for his future vocational career. Approximately 25 per cent of 15 year olds attend this course.[13] Originally the course had a very poor image and was viewed with certain lack of enthusiasm by firms. However, towards the end of the 1970s, its image changed and nowadays it is much more favourably viewed. About one third of the subjects offered may be chosen by pupils depending on their interests and career plans. In addition, pupils are given some work experience of work in firms. Some have argued that all would-be apprentices should be required

to take this one year course. However, the difficulty here is that it can put an extra year on those who begin an apprenticeship after following one of the other education routes.

Although the curriculum for this course is specified at national level, it is influenced to some extent by the provincial authorities and is thus somewhat adaptable to local workforce demands. A recent change in this course is the increased emphasis on foreign language training. English has become compulsory for all pupils and a second foreign language is available as an option. Another recent development has been where the curricula was changed to help prepare pupils for 'life long job mobility'.

Post-Compulsory Education

Compulsory education, as we saw, lasts until 15 years of age. By this time the youngsters will have completed either the prevocational one year course, the five years of academic secondary school (including four years of lower and one year of upper secondary) or will have spent a year in one of a variety of medium and higher level technical and vocational colleges. As already stated, the pupil has had two critical decision points: the first at 10 years and the second at 14 years. At 15 years a variety of options must again be decided upon and the main one is whether to continue schooling or not or whether to move from the pre-vocational to the apprenticeship system.

In Austria there is no upper cycle general intermediate school. As we saw there is only upper secondary academic school or a variety of medium and higher level technical colleges and we will now briefly look at the latter.

VOCATIONAL SCHOOLS

The Austrian vocational school system contains a variety of schools at different educational levels providing a range of skills for various segments of the labour market. It contains the following general type of schools:

- Medium level vocational schools (Berufsbildende mittlere Schulen-BmS) which offer full time schooling.
- Higher vocational schools(Berufsbildende hoher Schulen-

BhS) which also offers full-time schooling in the standard form.
- Apprenticeship schools(Berufsschulen) which provide part-time schooling as part of the dual training system.

To see how the full-time vocational schools fit into the overall school system, we can look at enrolment data which matches them against the higher level secondary school (AHS).

Table 8.2: Vocational and upper secondary school enrolment data

School types	Enrolment%	Enrolment
Upper secondary (AHS)	17	67,458
Vocational schools	83	336,484

Source: based on BMUKS (1990) data.

Note: The vocational schools include the prevocational year.

As we can see from 8.2 over four fifths of pupils attend vocational schools and the rest attend the academic upper secondary schools. Table 8.3 gives us the enrolment data for the different types of vocational schools.

Table 8.3: Post-compulsory vocational school enrolment data

Vocational schools	Enrolment%[1]	Enrolment	Enrolment%[2]	Enrolment
Medium-level	18	57,937	24	85,740
Higher-level	32	99,594	27	95,427
Apprenticeship	50	157,842	49	175,908

Sources: based on BMUKS (1990)[1] data and Plank (1987)[2].

As we can see above, the most recent data shows that the apprenticeship system contains half of the vocational pupils and the higher level vocational schools holds almost a third. Over the three years to which the data relates, the results show that there was a slight increase in the relative enrolment in the higher level vocational schools and a fall in the middle level categories. The

Austrian Ministry of Education state, in this context, that there was a marked tendency towards types of education which lead to higher qualifications and university access.[14]

The balance between the proportion of pupils who attend the three components of upper secondary school has always been considered an important factor. For example, in 1974 the balance between upper secondary(AHS) and upper vocational(BhS) was three to one and was expected to become four to one by 1980 unless something was done. Such a ratio was considered undesirable because of its impact on the relative numbers seeking a university place in comparison with those wishing to pursue non-academic based careers. An attempt was made, therefore, to reverse this trend and this was done mainly through what were called the School Development Programmes.[15] These programmes started in 1971 and operated by fixing quotas for school attendances and matching these to the schools building programme. Part of the early plans was to give an AHS:BhS:BmS ratio of 1:1:1. The present day balance between these segments of upper secondary can be seen in the table 8.4.

Table 8.4: Medium, higher level vocational and upper secondary school enrolment data

School types	Enrolment%	Enrolment
Medium level(BmS)	26	55,937
Higher level (BhS)	44	99,594
Secondary schools(AHS)	30	67,458

Source: based on BMUKS (1990) data.

In contrast to the original plan it is interesting to note that the higher vocational level holds the greatest relative proportion of pupils with the medium level the smallest. It is very difficult to make any relevant judgement on the present day AHS:BhS:BmS balance except to say that with the vocational schools holding the largest proportion of the upper secondary cohorts it is from here that a significant part of the Austrian labour market gets its labour force. For this, if for no other reason, it is necessary to look more closely at these schools.

MEDIUM AND HIGHER LEVEL VOCATIONAL SCHOOLS

All BmS and BhS curricula are organised nationally and contain a balance of general, theoretical, technical and practical subjects. In addition, the pupils normally have a relatively large number of classes in the week.

MEDIUM LEVEL VOCATIONAL SCHOOLS (BMS)

These provide courses ranging from one to four years. Entry to these schools depends in most areas on a pupil's performance in aptitude tests which determine admission to either the medium or higher level courses. In this respect some medium level programmes can be continued at higher levels. The BmS are organised under the nine middle level specialisations outlined in appendix 2:

The table below outlines the general distribution of pupils among middle level vocational schools.

Table 8.5: Medium level vocational secondary school enrolment data

Vocational Types	Enrolment%	Enrolment
Industrial	37	21,288
Business	23	13,228
Domestic science	21	12,160
Agriculture and forestry	17	9,837
Social work	2	1,373
Total		57,886

Source: based on ICE (1990, d)

As we can see above, industrial schools dominate, followed by business schools and then agriculture and forestry. Success in completing one's BmS provides specific rights. For example, it takes the place of an apprenticeship in certain occupations.

HIGHER LEVEL SCHOOLS (BHS)

As with BmS, these schools also begin at 14 years of age and provide five year courses in the following five specialisations - industrial, commercial, domestic science, tourism and catering, agriculture and forestry.

At the end of the BhS, as with the AHS, the pupil takes the formal matura exam. The successful completion of the BhS matura carries both professional rights of a higher level than the BmS and also allows university entrance. After three years of qualified work those who have graduated from the engineering, agriculture and some trade courses are awarded the title of 'engineer', if applied for. The table below outlines the general distribution of pupils among higher level vocational schools.

Table 8.6:Higher level vocational secondary school enrolment data

Vocational types	Enrolment%	Enrolment
Industrial	46	45,353
Business	37	36,670
Domestic science	14	13,899
Agriculture & forestry	3	3,224
Total		99,146

Source: based on ICE (1990, d)

Among vocational high schools the industrial schools again dominate and contain almost half of all pupils followed by over a third in the business schools. In contrast to the middle level schools, the agriculture and forestry proportion is tiny, whereas the domestic science enrolment is also proportionately much less.

Commentary

Always an interesting indication of any education system is the pupil teacher ratio in the different parts of the system.

Table 8.7: Pupil teacher ratios

School types	1988/89	1976/77
Compulsory general	19.50	26.10
Higher level general (AHS)	24.35	29.30
Apprenticeship	25.461	27.90
Medium level vocational (BmS)	22.99	37.10
Higher level vocational (BhS)	26.06	28.10

Sources: Plank (1987) and ICE (1990, d)
1.1987/88 data.

As we can see the ratio fell in all categories over the 11 year period (average fall of six per cent). The most noticeable fall was in the middle level vocational schools and the smallest was in the higher level vocational schools. These changes reflect in part pupil demand movements especially between the two latter categories.

It is difficult to assess the quality of the BhS and BmS schools without an in-depth evaluation which is beyond the scope of this work. However, an OECD team in a major review of the Austrian school system stated that these schools provided a carefully thought out, well constructed and richly supported system. In addition, they stated that since success in the vocational matura gave pupils from these schools the right either to proceed to university or enter a career in an industrial, commercial or social occupation, this further strengthens their attractiveness. According to the team no other secondary school in Europe offered such an advantage to its graduates. The OECD, however also expressed some misgivings. The most serious one being the worry that their specialisation may produce a graduate who is inadequately prepared for a continuously changing environment. However, the review team concluded that these schools were the 'jewel in the Austrian

crown'.[16] Allowing for the normal enthusiasm which may overtake an OECD review team studying any particular country and also the limited structures and resources within which such a study operates it was nevertheless one of the very best reviews and superior to the earlier 1970 one.

Apprenticeship System

Austria is a good example of the dual model of post-compulsory provision. It, along with Germany and Switzerland, is renowned for its highly developed apprenticeship system. In 1974 it had, at 5.4 per cent, the highest proportion of apprentices to labour force in the OECD - slightly ahead of Germany which, in turn was marginally ahead of Switzerland. In 1981 forty five per cent of Austrian 17 year olds were in apprenticeship and this figure was only surpassed by Germany and Switzerland. More interestingly, however, is that, by the latter end of the 1980s, the ratio of apprenticeships to labour force still lay at 5 per cent despite the trend in some countries for apprenticeships to decline.[17]

HISTORY

Austrian apprenticeship has its roots in the Germanic speaking area of medieval Europe where the guild system of craft training developed. The first legislation on in-firm training was in 1859 under the trade and industry code. This ended the autonomy of the guilds and the employers' associations were formed, under state supervision, in their place. In addition the legislation obliged firms to train apprentices - although this requirement was relatively weak. Apart from these two developments and other relatively minor changes, very little else was changed. This lack of fundamental change was explained by the fact that, although the guilds themselves were abolished, apprentices' matters were still largely under the control of the employers' association since apprentices by law were association members. Thus the 1859 law formed the bridge over which the administration and internal organization of the apprenticeship system passed from the guilds to today's Chambers of Trade and Industry.

In 1868 the first piece of legislation on the school based training component was enacted in lower Austria and related to the

development of schools for further industrial education. In 1881 further improvements were made and greater legislative uniformity was introduced for these schools. Their main purpose was to provide general vocational instruction rather than specific skills. Around 1900 a small number of specialist trade schools were set up and as time went by compulsory school attendance was gradually introduced for more and more trainees.

Meanwhile the 1907 amendment to the 1859 in-firm apprentice legislation brought considerable changes. For example, it was made more difficult for companies to take on apprentices. In addition, a two to four year period was fixed for an apprenticeship along with such things as the exam and certificate regulations, the training contract and the allowance for attendance at a trade or commercial school. In the 1920s the apprentices legal right to pay and stay with his firm after passing his exams was covered by law.

Between the two world wars different parts of Austria began to model their industrial school system on the lower Austrian model based on its 1868 and subsequent legislation. This school based vocational training system was restored after the war largely through administrative channels and without a proper legal base. As a result the actual legislation created legal uncertainty which did not end until the 1962 school law.

In regard to the in-firm component of apprenticeship the 1859/1907 legislation formed the basis of the Austrian system up until the 1969 Vocational Training Act. In the 1950s and 1960s it had become clear that the large number of laws, regulations, guidelines, etc. on vocational training needed to be tidied up. The discussion which occurred at that time eventually led to the 1969 Act and following that to the 1978 amendment to this act. This, together with some other legislative changes since then, provides the legal basis for the present system. It is summarised below.

ORGANIZATION

The administration of this system is not as unified as in certain other national apprenticeship schemes and it has been described as rather complex. The Ministry for Education, Arts and Sports prepares the basic legislation on apprentice schools and the nine provinces implement it. On the other hand, the Ministry of Trade and Industry is responsible for legislation on the in-firm apprentice

training elements of apprenticeship.

At national level, the Vocational Training Advisory Council, together with the nine provincial councils, advise the Ministry for Trade and Industry and the nine provincial apprentice offices on the development of the apprentice system. These councils have an equal number of employer and employee representatives. In addition, the provincial councils each have two apprentice school teachers who act in an advisory capacity.

One of the more important elements of the system is the provincial apprentice offices. Each of these supervises vocational training in its own area. In doing so it has to ensure that firms with apprentices comply with the law and for this purpose they can inspect a firm's training operation and records. The offices are set up under the sole authority of the employers' organisation or chambers of employers. Thus, although the advisory councils, which contain representative of both social partners, have an important advisory role in apprenticeship, the apprentices offices at provincial level have operational control. Thus employers at firm and chamber level continue significantly to control the Austrian system. This structure of responsibility has a long historical tradition going back to the guilds which predated the 1859 setting up of the employers' association. This continues to be the case, despite the fact that trade unions have for years urged that a new organization should be set up at operational level in which they would be fully represented. On this point, the negotiations leading to the 1978 law saw the employees', representatives argue that apprentice matters should be administered by a body composed of equal numbers of representatives of employers and unions. In addition, they argued for a government based vocational training institute which would determine the content of in-firm training and a vocational training fund to finance it. However, the negotiators failed to agree on any of these points and they were not included in the amendment.

It may help to explain the chambers' system in Austria. The Austrian constitution provides for the existence of various chambers legally to represent the interest of different groups. Two of these are the Federal Chamber of the Economy, representing the employers and the Council of Austrian Chambers of Labour who look after employee interests. Chamber membership is compulsory. As part of their representational role the various chambers have the

right to put forward detailed comments on government bills prior to being laid before parliament. This power was first established as far back as 1868. This can go so far that the first draft of a bill is are worked out, not in the ministries, but in the offices of the four big chambers. To help ensure its representational role, the chambers form of organization is set out in law and democratic structures are based on a 1920 act which provides for secret and equal voting for chambers of trade. Apart from its representational role, the government also entrusts the Federal Chamber of the Economy with a variety of administrative tasks the most important being the apprentice system.

ENTRANCE

Almost every second apprentice starts an apprenticeship after finishing his or her polytechnic year according to table 8.8.

Table 8.8: Education background of apprentice beginners

	%
Polytechnic course (PL)	45.4
Basic secondary school (HS)	24.6
Medium vocational school (BmS)	12.0
Higher vocational school (BhS)	7.3
Upper secondary general (AHS)	3.4
Miscellaneous	7.3

Source: Winkler (1988,12)

As we can see, very few apprentices come from upper secondary. Although the numbers from this group have been increasing in recent years this increase relates mainly to school drop-outs.

A person can become an apprentice if he or she has completed compulsory education and is at least 15 years old. No apprentice exam is necessary to get into an apprentice school, the person simply needs to be employed as an apprentice. By definition an apprentice is a trainee who, on the basis of a training contract, is given skilled training by an authorised trainer. This contract has two elements. First, it requires the employer to ensure the

apprentice is trained. Second, it establishes an employment relationship since apprentices are employees by law and are entitled to a wage which is fixed by collective agreement. This wage can vary between different apprentices and also within any apprentice trade from year to year. For example, let us assume a bricklayer apprentice at 100 per cent wages. Then the data shows the equivalent year fitter apprentice at 73 per cent, a retail merchant apprentice at 55 per cent and a hairdresser apprentice at 40 per cent, indicating quite a wage disparity. In addition the apprentice wage amounts to on average about 40 to 50 per cent of the qualified wage. In this area the OECD provides more detailed data. For example, a first year apprentice varies from 28.5 per cent of the qualified wage to 35.1 per cent over 5 different trades whereas in all trades the final year apprentice wage was around the 65 per cent mark.[18]

APPRENTICE OCCUPATIONS

The Ministry of Trade and Industry publishes the list of skilled apprenticeship occupations. In the early 1970s this ran to just over 300 in the mid-1970s it fell to 227 and by the late 1980s it was 223. The decisive factor for including an apprenticeship occupation in the official list is whether the apprentice occupation meets a real labour market need.[19]

The most recent data show that 85 per cent of females and 52 per cent of males each take the ten most popular apprenticeship trade for their sex. For example, over a third of the girls take retail merchant and a quarter take either office clerk or hairdresser. Although the boys are not as concentrated in their choice, still almost a third take either car mechanic, joiner, electrician or retail merchant. In addition the sex concentration is rather traditional with technical and trade oriented occupations dominating the male choice and commercial and clerical the female choice. Apprenticeship concentration has not changed much over the years. In 1971 almost 57 per cent of all trainees were in the top ten occupations and in 1980 the figure was 58 per cent. The male/female split was very similar in 1980 to what it was a decade or so later. Then about 87 per cent of all girls and 54 per cent of boys were concentrated in the top ten groupings. This is only slightly more than the more recent data as we saw above.[20]

APPRENTICE SECTORS

Apprentices can be grouped according to the sector they operate in. In the table below we show how the sector distribution has varied since 1950.

Table 8.9: Apprentice distribution by sector

	Crafts	Commerce	Industry	Tourism	Transport	Other
	%	%	%	%	%	%
1950	74	13	12	1	>1	-
1965	60	22	14	5	>1	-
1980	53	22	15	8	1	2
1986	51	20	15	11	2	3

Note: each percentage rounded up to the nearest one

Sources: OECD (1967,63), Lutz et al (1982,39) and Gottfried (1988,11).[21]

Although the small firm crafts sector has decreased in relative size over the years, the actual number of trainees in this sector increased by 17 per cent. The commercial trades grew strongly up to the mid-1960s but their relative position has declined slightly since 1980, although their absolute numbers have grown by one and a half times since 1965. The industry sector has shown little change in relative size, although the absolute number of apprentices here has gone up during the period by more than double the 1950 level. Tourism has increased strongly in both absolute and relative terms whereas transport remains relatively unchanged.

Regarding the size of firms, it is interesting to note that the small firm sector in Austria is relatively more important than in many other comparable European countries. Approximately 80 per cent of apprentices are found in small and medium sized firms. It is also notable that 40 per cent of firms which took on apprentices in 1970 had ceased doing so 10 years on, telling us something about the volatility of this sector. Due to this, concern has been expressed about the impact on an apprentice's training of a firm having to close down. As a result, a 1985 amendment to the School Act stated that apprentices who had passed a least half of their training period, and who were unable to find a firm to finish their

apprenticeship with, could continue at apprentice school. Before this amendment was passed in 1987 any interruption of the apprenticeship in the firm meant that the school training also stopped.

Another aspect of the small and medium sized firm dominance is that the apprentice school system must allow for this in its curriculum. For this reason the apprentice school provides additional practical training and skill instruction so as to compensate for those firms where production experience in technology is inadequate.

APPRENTICE SCHOOLS

One half of the Austrian dual system is provided by the part-time apprentice schools whose function is:

- to provide the basic theoretical knowledge for each skilled occupations
- to supplement and support in-firm training
- to develop the pupil's general education

The Austrian apprenticeship system is regarded as being part of the educational system rather than labour market policy and the in-school part is, therefore, the responsibility of the Ministry of Education.

The number of apprentice schools has fallen, as we can see in table 8.91 between the mid-1960s and the start of this decade. However, although the number of pupils has increased slightly since then, the relative level of apprentice pupils to total pupil population has varied only marginally indicating a certain stability in the system over the period.

Table 8.91:Apprentice school data

Apprentice Schools	1964-65	1989-90
No. of schools	277	244
No. of pupils	146,949	158,940
	of which 34% female	of which 35% female
Pupils to total school population	13%	14%

Sources: OECD (1967,64) and BMUKS 1990 data.

Apprentice school attendance is compulsory and it begins and ends with the apprentice relation (with the exception of the impact of the 1987 amendment). The apprentice school operates either on a one day a week basis throughout the year or on a block release basis with eight weeks period of school work. Alternatively there are those which function on a seasonal basis where classes are provided during a specific season of the year. A variety of bodies, including the chambers of commerce and trade, run boarding schools where pupils are accommodated during their training. When at school, pupils are paid by their employers.

Over the years, the all year one day apprentice school declined in importance as the eight week block-training variety(normally residential) came to the fore. This block training variety is particularly important in thinly populated areas and for those skills with relatively few trainees. By the early 1980s, over half of the trainees were being trained by the block system. At this time also about two-thirds of school time was allotted to specialised skill instructions (occupational theory and work technique) and one-third to general subjects such as business management and civics.

Originally, the normal form of apprentice school was a general industrial school. But since 1945 they have become more specialised and schools now exist for trade, craft and commercial, domestic science, agriculture and forestry occupations. In the 1984/85 school year two different performance groups were set up for the compulsory subjects of business management and occupational theory and one of these groups was given more in-depth material during class. Where performance groups operate, coaching courses are given to pupils to help them move to a more

advanced stream or to prevent them being relegated to the less advanced stream. These courses are compulsory. Optional coaching courses are provided in other compulsory subjects for weaker pupils or for those who experience difficulties after moving apprentice schools.

In order to internationalise the dual system, Austria introduced a new curriculum on a three stage basis in September 1990. Apprentices now attend one extra half day a week. This is mainly for a new compulsory subject 'vocational oriented foreign language' which means that all apprentices must study English. The extra school time can also be used to teach special subject knowledge.

The normal training period for an apprenticeship is two years but can vary from two to a maximum of four. If an apprentice takes two skilled occupations at the same time the total training period may not exceed four years. At the end of the formal period the trainee becomes recognised as being qualified in a particular trade. If in addition, the trainee takes and passes the apprentice exam he or she has the right to use the title 'skilled worker'.

Instead of the above process the complete apprenticeship can be taken at school. This can be done in certain occupations by successfully completing the relevant course and exam at a secondary vocational.

IN-FIRM TRAINING

The other half of the dual training system is provided by the firm. The legislation specifies the type of firms or organizations which are legally authorised to train apprentices and to do so they must provide suitable trainers to provide the skills being taught. The details of the skills to be taught by the employer in each apprentice area is laid down in the job profiles for each year of the apprenticeship. These are issued by the government as part of the training stipulations. The standards listed in these profiles are, however, only minimum requirements. Winkler states that there are about 51,000 employers training apprentices in Austria accounting for about 40 per cent of the total employer population. According to Lutz et al, the average employer employs about three apprentices per firm. However, there are both sectional and regional variations in this. In the industrial sector, the number of trainees is well above average with a larger number of trainees generally in the larger

concerns.[22]

We will look briefly at a relatively large industrial firm - Lenzing AG - to see how it deals with apprenticeships. This company lies just inside the top 50 Austrian enterprises. Over 70 per cent of its turnover is composed of synthetic fibres and paper and over 75 per cent of its product is exported. It employs approximately 3,700 staff and trains 180 apprentices down from 220 in the mid-1980s. Lenzings' training centre is operated by a staff of about 20 people. There is a department head with nine staff in the technical area, eight in chemistry and two in management and administration. Of its total training budget 62 per cent is allocated to apprenticeship training and 38 per cent to adult training and retraining. In the latter case about two thirds of this expense was on in-firm training and the rest was out of company training.

Although its apprentices comprise just 4.8 per cent of its staff numbers, their training accounts for seven per cent of overall labour costs, which itself amounts to one third of turnover. Lenzing AG provides training for about a dozen different trades. At the start of the 1980s, 70 per cent of its trades were part of what we could call the traditional categories of fitter, electricians, etc. However, by the end of the 1980s, this had dropped to 50 per cent due to the increased needs for new trades such as chemical processor, physics lab assistant and so on. In the classical trades, the company has been training more apprentices than it can employ but in the other trades it only trains what it can take on. It also provides for combination trades such as administrative assistant combined with textile or chemical processor, etc.

Lenzing is not an average apprentice training firm and it claims to provide the most comprehensive in-firm training programme in the Vocklabruck area in Austria. However, it is an interesting example of a company which takes a serious approach to its staff training needs.[23]

When a firm is unable to train its apprentices adequately the training gap can be filled through a group training scheme. This, however, seems not to be the significant development it is in Norway where training rings have proved quite an effective structure for helping small firms pooling their training resources. In Austria the group training workshops are funded from a variety of sources including government, provincial government, training providers own funds (the chambers, etc.) and firms themselves.

EXIT

The apprentice may take the apprentice exam, at the most, eight weeks before the end of the apprenticeship. The exam contains both a practical and theoretical section and is judged by an exam board comprising both employer and employee representatives. Recent data show that over 85 per cent passed this exam.[24] The importance of getting the exam for the candidate is that he or she receives certain labour market rights in relation to their skill. For example, to practice certain occupations one must have gained the exam. It is not enough simply to have completed the apprenticeship period.

What happens after the exam is complete? As we saw elsewhere the completion of an apprenticeship does not necessarily mean that the skilled worker will end up in the exact same job as he or she qualified in. In the traditional area for apprentice training - Austria, Germany and Switzerland - apprenticeship is viewed as a very useful introduction to working life. There is no great concern if apprentices end up working in jobs different to their specialization. According to the OECD the completion of an apprenticeship is itself a credential widely accepted by an employer, as evidence of good working practices.[25]

This last point affects the actual career turnout of qualified tradespersons. For those who finished a three year apprenticeship the data shows that only 50 per cent stay in the same trade to the one they were trained in, 20 per cent enter a related trade and 30 per cent enter an unrelated trade. In addition 5 -10 per cent were unemployed for a time after their apprenticeship.[26] In Austria one can complete the apprentice exam in one trade and then do an extra exam in the related trade ending up double qualified. This option arises out of the official apprentice list where certain trades are grouped as 'related apprentice occupations' so as to allow for transfer from one apprenticeship to another. This partly explains some of the flexibility of the system.

In June 1986, an amendment to the School Act opened up access for apprentices of educational careers up to the matura of the higher vocational schools. In effect this gave apprentices access to university and thereby increased its attraction to potential apprentices. Despite this amendment it is still very difficult to travel the apprenticeship, higher vocational route to university.

COMMENTARY

The dual system in Austria has from time to time aroused a certain amount of international interest among academics, government policy makers and at international forums. It is worth remembering here that the type of apprenticeship found in many of the English speaking countries is somewhat different to the Austrian model. Many countries such as Ireland, Australia and New Zealand have been strongly influenced by the long apprentice tradition of England. The key ingredient here is the traditional role of the craft trade unions. This contrasts with the central European system where unions have a less significant role. Even in Austria, with its strong social partnership system, the apprentices office is the historical child of the original guild which was set up by employers. Also there has been a greater emphasis on general education and detailing of apprentice school instruction along with a somewhat broader concept of apprenticeable occupations. We will now outline some summary comments on the Austrian system.

(i) A possible drawback with the system is the lack of a central coordination agency as occurs in Sweden, Germany or Ireland. Two ministries, the various chambers, the school system and individual firms, all with different institutional bases and needs, may not be the ideal structure for this system. However, a single institution may have its own drawbacks such as over bureaucratising the system or preventing the variety which may be necessary to allow the different parts to grow and develop. This is a topic which would require much consideration. All we can say here is that, should serious difficulties arise in the Austrian system due say to a mismatch of apprentices with market needs, greater coordination may be needed.

(ii) A difficulty with the Austrian school system is the early stage at which career decisions have to be made. This is quite important in the apprenticeship area where young people decide at 15 what apprenticeships to go into. However, if such a large proportion of the Austrian 15 year cohort were entering an English-style apprenticeship system this would cause even greater difficulties. As we saw above, many trainees enter other jobs than they were trained for and some do two apprenticeships in related trades. In spite of any problem this early decision may cause it is fair to say

that the Austrian education system is a relatively watertight system with a reasonably high retention rate. If its dual system were weaker, the retention rate would most likely be a lot lower, leaving Austria to develop some other type of education or work/training safety net to retain and develop those who did not remain in the upper secondary system. According to the OECD the holding power of the Austrian post-compulsory provision is equal to, or superior to, that in many other countries and this is mainly due to the dual system.[27]

(iii) As we saw above, a large user of the dual system is the small and medium sized firm sector. Because of the relatively low labour cost of trainees such firms are inclined to employ as many apprentices as possible. The relevance of this fact to the quality of in-firm training is that there is a large variation between firms and sectors. Smaller firms, by definition, have less training opportunities than larger firms, this is due to their more limited resources and the variety of their work processes. For the small firm sector it is necessary, therefore, to have a strong link with the apprentice school to ensure that training deficits are filled. However, the OECD casts some doubts on the quality of school firm links by stating that there was a lack of effective liaison between the two main players in the system. In addition the other solution to the training deficits of small firms, namely group training, appears to be much less developed than its equivalent in Norway. Also, certain large firms, according to the same OECD report, have closed down or would like to drop their apprentice programmes since they view it as an expensive and inefficient way of producing the qualified workers they need. In many small firms, apprentices are fully on the job and reasonably productive from the start except for their school commitments. In many larger firms, however, apprentices are trained in special training centres for the first two years of their training. For this and other reasons it is argued that large firms are becoming disenchanted with the system and are reducing the number of occupations they are training through apprenticeship and are setting up separate training programmes.[28] It is interesting, in this context, to recall how Lenzing changed so significantly has had the ratio of classical to combination trades over the last ten years or so.

Despite the above, the Austrian dual system has many advantages for such a small firm dominated economy. Here the

smaller firms provide some training opportunities in return for low labour costs. When many of the skilled employees leave the small firms and move on to get jobs in the larger firms they leave gaps for the new recruits to fill. It is true that there will be some variety in the quality of training provided to the apprentice depending on the size of the firm and the sector it belongs to. However, if this difficulty is to be reduced quickly Austria would have to either:

(a) increases the state's role in apprenticeship training
(b) increase the role of group training schemes most likely with state support.

If neither of these are options then the training quality will depend on the firm. In other words, if the quality of the apprenticeship system is to be improved then the firm-trainee-school matrix would have to be changed and this is difficult to do in a relatively low public sector system. On this latter point the recent decision to expand the apprenticeship school training element by a half a day indicates a move to increase the school's role in the system and thereby the public sector's impact and will help to do two things. First, it will reduce the over specialised training of the dual system. Second, it will reduce the impact of training variability between different sized firms.

To conclude, the OECD indicated that there are some signs that the dual system's role may contract particularly because of its limited capacity for reform. It is too early to make any firm comment on this prediction except to admit that the statistics show that its role has been both significant and stable over the last 30 or so years and this writer would prefer to wait and see before offering yet more predictions.

Tertiary Education

The tertiary sector in Austria contains both a university and non-university sector (NUS). However, it can only be said to have a binary system in the sense that it has not taken the unitary path of Sweden. The university sector dominates the post-secondary phase holding, on the most recent available data, 90 per cent of total enrolments.[29] Although most of the rest of Western Europe has either developed a strong binary system as in Norway, the UK and

Ireland or taken the unitary approach of Sweden, Austria is still considering how best to develop its NUS element. This has been given added impetus by its application to join the EC. In looking at the tertiary sector we will first look briefly at its historical development.

HISTORY

Austria has a long university tradition going back over 600 years to the founding of Vienna University in 1365. It is the oldest extant university in the German-speaking countries, was modelled on the University of Paris and concentrated on the teaching of theology and philosophy. It was granted relative autonomy from influence by the church and monarchy and, although it flourished during the Italian Renaissance, it went into decline in the first quarter of the 16th century. It was placed under the control of the Jesuits in 1554. Graz University was founded in 1585, from an already existing Jesuit college. Innsbruck University was founded in 1669 and was also run by the Jesuits. The Benedictines had already established Salzburg University which had been operating since 1623. Thus in the 1700s, Austria, as we know it today, had four universities independent of the state. At the end of the eighteenth century a wide ranging reform of education put the universities under state control. Innsbruck and Graz closed as part of these reforms and not reopened until 1826 and 1827 respectively. However, Salzburg was closed in 1810 by the Bavarians who then ruled the city.

The major 19th century reform of the universities, which guaranteed autonomy of teaching and research, did not arrive until after the 1848 revolution in which the students in Vienna University were involved. Entry to university now became based on an education process which led to the matura and there was a considerable growth of personnel and material resources made available to the universities. This whole process was part and parcel of the growth of liberalism and the development of sciences in Europe at that time.

The basis of today's technical universities goes back to the early 19th century and the second half of the century brought the development of technical and specialised colleges set up to meet the needs of the industrial, commercial and farming sectors. In 1929 the constitution made higher education the responsibility of the state

following the earlier disappearance of the monarchy. However, the universities were not the well-spring of social progress which some had hoped they would become. Between the wars a majority of staff and graduates were considered to be insufficiently enthusiastic about the republic and democracy in general and were against the ethos of the labour movement.

After the second World War the memory of the reactionary role of the universities weakened their status. In addition, a large number of scientists had fled the country to escape the war time regime. Consequently, no major university developments took place until the 1960s, except for one act in 1955 which related to the administrative structures of the universities. This set out the organizational framework for higher education but did not make any fundamental change. This did not occur until the 1975 University Organization Act which saw the completion of a preparation process going back to the mid - 1960s.

The origin of today's non-university sector goes back to the end of the 18th century when legislation on teacher training was enacted. This was amended in the second half of the 19th century and remained the state of play until the 1960s. Today's NUS is the result of the school reforms of 1962 except for compulsory school teachers and the training of social workers and paramedical staff. The 1962, School Organization Act set up teacher training academies for compulsory and vocational education. The Austrian higher education sector is today dominated by the university sector with the NUS composed mainly of teacher training institutions.

UNIVERSITIES

There are 12 universities and 6 fine-arts colleges with university status in Austria. The latter were recognised as higher education institutions in 1970 and go back to 1696 when an academy for painting, sculpture, architecture, perspective and fortification was founded. Six of the nine provinces of Austria have universities.

Universities and colleges are federal bodies. They are, therefore, almost entirely financed by government and their income from such sources as endorsement, research, consultancy and donations is relatively small. University staff are federal public servants and the teaching staff have their own civil service rules. The annual budget of the universities and colleges is part of the federal

government's estimates and is prepared by the finance ministry and passed by the parliament. Students do not pay tuition fees and related study costs such as books, etc., are relatively modest. A system of financial support for students was set up in the 1960s. It is based on a means test which ensures that a large portion of a student's living expenses are provided by students and their families. Only a quarter of their maintenance expenses are covered by the state.

The universities are responsible to the Minister for Science and Research in such areas as funding, appointments, establishment of degree courses and so on. University autonomy means that universities are subject to legislation but not to orders by the minister. The process of developing university legislation reflects the social partnership structures in Austria. Drafts of legislation in the area are submitted to the chambers of commerce and labour and interest groups such as the universities, the provincial government and the Austrian Students' Union (an institutionalised interest group). This approach ensures the various points of view are expressed prior to legislation. However, some argue that it allows too much corporate influence on the university development process. This is something we will refer to again on the issue of curriculum development.

Entry In theory, universities are open to all those with a matura over 17 years of age. However, since the 1962 Schools Act, graduates of vocational upper secondary were also entitled to university admission. Part of the change, as we saw earlier, was to a two track system into upper secondary. This was meant to strengthen the vocational role in the education system, which it succeeded in doing. Those who have completed general upper secondary usually go on either to university or the NUS sector because they have not had any vocational training. In contrast, many of the upper secondary vocational graduates enter the labour market and only about 40 per cent of them go on to university.

Course The various curricula are prepared by study commissions set up by the universities. These commissions are based on a tripartite structure of professors, junior staff and students. The revision and development of curricula is time consuming and it is argued that the highly structured process restricts the universities, ability to develop new courses to match the changing needs of society. In addition, university staff argue that the organization of

higher education is over legalised and too school like. As regards the range of courses offered, it has been noted that, although the legislation provides for the provision of vocational non-degree courses for adult and recurrent education, the commitment of the universities in this area is limited. Ninety six per cent of students take degree courses.[30]

As regards the duration of study, the minimum length of time is generally four to six academic years. However, only about six per cent complete their studies within the minimum period. Forty eight per cent exceed the time by up to two years and 46 per cent by 2.5 or so years.[31] This results in a relatively late age of entry into the labour market.

GRADUATES

The number of people graduating has continued to rise since the early 1960s. It increased by over double between 1960 and 1980 and is projected to increase by a further 35 per cent by the end of the millennium. This increase is expected in spite of the falling birth rate. The proportion of graduates in the Austrian labour force has grown continuously since 1951 when it was 2.3 per cent, up to 1981 when it was just below four per cent. The total number of graduates is expected to increase between 1990 and 1995 by 30,000 or 19 per cent by which time they will form 5.5 per cent of the labour force and will increase to six per cent by 2,000.[32] The level of unemployment among graduates remained relatively low in recent years but has tended to rise lately.

Non-University Sector

As we saw above, enrolment in the NUS is less than 10 per cent of the tertiary sector leaving it as the minor partner. The NUS is a heterogeneous sector with a variety of different components. First, there are the teacher training academies which enrol about 80 per cent of the students in this sector. Then there are the medical technical schools, which hold about 15 per cent, and the academies of social work, which hold only a small proportion of the total. In addition the vast majority of pupils (80 per cent) in these three areas are female.[33]

Included also in the NUS by Pechar and Lassnigg are BhS -

Kollegs.[34] The status of this institution can vary depending on the source. They are not included by the Ministry of Science and Research in the higher education sector in its 1988 publication. Phlank, in his 1987 work, referred to them as a quasi post-secondary body and a post-secondary body in his 1990 publication. Kollegs exist at both higher technical and trade schools and at higher commercial schools and they provide the general upper secondary school leavers with the equivalent education of a higher vocational school over a one and a half to two year period. They provide either commercial or administrative courses and these are similar to their upper secondary vocational equivalent. Having said that their curriculum is of a high quality and the labour market prospects for both type of Kollegs are similar to their BhS equivalents. The admission requirement to a Kolleg is the matura exam from a general upper secondary school. A Kolleg can also provide adult education. Thus these technical and commercial courses, which in many other OECD countries would be part of the tertiary education sector, are in fact mainly tied into the secondary sector in Austria.

The organizational and financial structures of the components of the NUS vary. For example, the 23 teacher training colleges are owned either by the church or the government. They are, regardless of ownership, however,all operated under federal legislation and work to the education ministry. Depending on ownership, the funding is either all federal or part federal and part church. The 36 medical technical schools are owned either by the province, the community or private organizations and their financing is the responsibility of their respective owner. They operate under government legislation prepared by the health and environmental ministry. Finally, nine social work academies operate to the education ministry and are owned by a variety of bodies including the federation.

Admission to teacher training colleges requires the matura and, for some, practical experience is a further requirement. Admission to the NUS sector is relatively more restrictive overall than it is to the university sector, despite the latter's higher status. This is because all NUS bodies can refuse students admission due to limited places or can regulate entry through exam.

University - NUS Output

Apart from enrolment information, an important factor is graduate throughput. The table below gives the graduate numbers for certain years between 1977 and 1987.

Table 8.92: Graduate percentages for universities and the NUS.

Sector	1977	1981	1987
University	49	55	65
NUS	51	45	35

Source OECD (1992,e,127-128)

Over the above period the number of university graduates increased by 52 per cent in contrast to a fall in the NUS of 20 per cent. The major change within the NUS was the 28 per cent fall in teacher graduates which explains most of the sector's decline. Thus, although the NUS has only a small proportion of the overall tertiary enrolment, it forms a reasonably large proportion of graduates. This is so for at least two reasons. The NUS drop-out rate is much lower than the university one and the NUS courses are shorter. The average length of university studies is about eight years.[35]

Where do university graduates go? The table below shows the distribution of employed graduates over a period of years.

Table 8.93: Employed graduates - their percentage distribution

Economic Sector	1971	1981	1987
Agriculture	0.8	0.6	0.3
Production, energy supply, construction	15.2	12.8	10.4
Public or social services	57.3	64.6	68.7
Private or business services	26.7	22.0	20.6

Source: OECD (1992,e,141)

There has been an increase in the employment of graduates in the public sector where almost 70 per cent of graduates end up. About 80 per cent of these are in teaching, public administration and health. Interestingly whereas just over 20 per cent of all graduates were working in education in 1971 the figure today is 41 per cent. Thus a major element of the tertiary sector's output ends up back in the education sector.

COMMENTARY

Austrian tertiary education is not as interesting from an international perspective as its secondary sector. It does not provide the tertiary follow through to its highly regarded secondary system. Its imbalanced binary structure is dominated by an over pressurised university segment which has little autonomy in organising its academic and management activities. The hope that a fall in birth rate would reduce the excess demand on universities has not happened. Added to the pressure of places is the high drop-out rate with only about half of all entrants completing their studies. The drop-out rate for males is somewhat higher than for females. This phenomena is not new since the drop-out rate in the early 1970s was slightly higher. One cause for this relatively high level of institutional wastage is that a proportion of students in university begin their studies without ever intending to complete them. It is also due to the open study system which does not require formal attendance as a study condition. It is not surprising then that almost all comparable OECD countries have a higher relative number of university graduates than Austria.[36]

Another possible explanation of the high drop-out rate must also be the fact that the main tertiary outlet available for academic upper secondary graduates is university. From 10 years of age the AHS pupil has set in motion a learning process which reduces his vocational options. If he wishes to change to a vocational course after his matura he has to spend an extra period in a vocational Kolleg. The number of AHS graduates who entered the labour force directly after school was already low in the 1960s and has continued to decrease since then. Therefore with very few post-secondary options to university the majority enter university.

Scott identified three stages of development in a tertiary sector.[37] The first, allows the various institutions and their sub-elements a

high level of autonomy thereby giving each control over what they develop or curtail. In this situation the state provides support but does not intervene in the detailed planning. This could best describe the Austrian situation prior to the 1975 Act. The second, divides higher education into distinct categories of institutions and gives each category a different function. Whereas the 1975 Act specifies the role of university it did not do anything to further develop the NUS sector beyond what was done in the 1962 Schools Act. This act related mainly to the school system and its NUS relevance concerned teacher training. Thus if we were to fit Austria into Scott's paradigm it would be located from the university perspective in stage two and on the NUS count in stage one. The third stage divides tertiary education into much finer and more developed segments. Here the relevant or coordinating agencies would exercise a more detailed supervision of higher education in order to provide more fine grained programmatic distinctions.

The Austrian dual track secondary sector would appear to require a complementary dual track tertiary sector, if for no other reason, than to ensure that its vocational secondary system would, where necessary, have a suitable tertiary outlet for its more educationally ambitious graduate. In addition, the Austrian labour market could benefit from a more varied and developed NUS graduate. For example, it has been noted that the number of university engineers was inadequate for the needs of industry during recent growth phases and these needs had to be filled by BhS engineers. They argued that such a solution is probably not the best. By contrast, in other areas, the university sector provides too many qualified graduates for certain labour market segments.[38]

Will the tertiary sector undergo change? The process of change in the Austrian primary and secondary sectors was rather slow, as we saw earlier. A two-thirds parliamentary majority is required to amend the 1962 Schools Organization Act. No such requirement exists for college and university legislation. Franz Partisch, a Ministry of Education civil servant, drew up a plan for setting up post-secondary vocationally oriented institutions in the late sixties. However, when his plan was publicly examined in 1970, it was rejected. First, the universities argued that post-secondary education was their business. Second, BhS representatives felt that such a development would significantly weaken their attractiveness. Finally, industry representatives were not very

enthusiastic.

However, a developed NUS may yet arrive in Austria due to both internal and external pressures. First, there has been a general dissatisfaction, since the early eighties with the lack of university resources and this erupted in a student strike at the end of the last decade. Second, the large proportion of graduates in both the public sector and in particular in education may indicate a need to widen the qualification range of tertiary graduates. In this context over 70 per cent of unemployed university graduates were teachers and medical doctors.[39] As important, are the changed external circumstances whereby Austria is concerned with her ability to compete internationally and her need to ensure a suitably educated labour force to continue to maintain her competitive edge. In this context the expansion of the NUS has been suggested again especially as it now gains greater impetus with her interest in joining the European Community. It is probably the case that the present concurrence of these forces may yet unlock the institutional inertia which Partisch failed to move.

Conclusion

To conclude our discussion of the Austrian education system we will look briefly at the output of the system and the trends which this indicates.

Table 8.94: Gross output of education system

Institution	1977 %	1987 %
Middle-level secondary		
- Apprenticeship	55.4	47.1
- Middle level vocational	14.9	14.0
Higher-level secondary		
- general	13.5	14.8
- vocational	6.3	12.3
Total secondary graduates	90.1	88.2
Post -secondary		
- University	4.8	7.5
- NUS	5.1	4.2
Total post-secondary	9.9	11.7

Source OECD (1992,e,109)

The main growth area is the higher level secondary schools which have increased by over a third on the above data. Within this category is the very large growth in the higher vocational which now almost matches the general stream. The middle level vocational sector has more or less held its own whereas the apprenticeship has sustained a noticeable decline in relative terms. Two factors can help to explain this process.

First, research shows that trend in employment over the same period indicates a distinct shrinking of industrial craft job's in relative terms, although it is still the largest work sector, followed by trade, business and administration. The most interesting development is that in this industrial craft category, along with the business and administration area, there is a strong upgrading process. Graduates from higher secondary and post-secondary are growing, with those from apprenticeship and middle-secondary falling.[40]

Thus the upper-secondary continues to expand within the overall education system. However, maybe now might be the time to consider developing a strong NUS sector to extend into this level the good work of the secondary phase.

NOTES TO CHAPTER 8

1. See Therborn (1986) p.44 and OECD 1992,c) p.39 and 40 for the data covering the above.
2. See OECD (1981) p.46,47 and 184. This study was part of a broader study of integrated social policies in a variety of OECD countries.
3. See OECD (1981) p.16-17
4. See Federal Press Service (1987) p.14 and (1988) p.35
5. See OECD (1981) p.159 and 224.
6. See OECD (1990,c) p.53 and OECD (1988,d) p.14.
7. See Budzinski (1986)p.294 and Qualification 2000, 1990 p.1
8. See OECD (1981) p.31 and Seidel (1989) p.90.
9. See OECD (1979) p.19, OECD (1989) p.30 and Schedler (1987) p.15
10. See OECD (1979) p.31 and Qualification p.4 and 19.
11. See Gruber (1985) quoted in Budzinski (1986) p.290
12. See Plank (1990) p.25 for the above data.
13. See ICE (1989,c) p.22. ICE (1990,d) has not updated this data.
14. See ICE (1990,d) p.73. This of course is not to say that a pupil cannot eventually make it to tertiary education.
15. See OECD (1979) p.54 for a somewhat fuller explanation of these points.
16. See OECD (1979) p.62
17. Two useful sources on the Austrian Apprentice system are Lutz et al (1982) and Winkler (1988). See OECD (1979) p.25 and OECD (1985.a) p.45. The final statistics in the paragraph are derived from OECD (1990) p.96 and the total civilian employment data in 1988 is derived from OECD (1991,a). Basic statistics - Austria.
18. Data based on OECD (1989,c) p.37, Brodsky (1989) p.40 and Winkler (1988) p.16.
19. See Winkler (1988) p.10.
20. The above data in this section comes from OECD (1977) p.48, Lutz (1982) p.32, 39-40 and Winkler (1988) p.9-10.
21. What OECD (1967) classifies as 'commerce' Lutz et al (1982) classifies as 'trade'.
22. See Winkler (1988) and Lutz et al (1982) p.42
23. The information on Lenzing AG above was kindly provided by Toni Nobauer, Head of Education Department and included Lenzing AB (1987,a) (1987,b) and personal communication March (1990)
24. See Winkler (1988) p.19.
25. See OECD (1979,b) p.79.
26. See OECD (1989,c) p.36
27. See OECD (1989,c) p.71
28. See OECD (1989,c) p.38, 39 and 73
29. Based on data extracted from ICE (1990,d) which excludes medical-technical schools. An earlier reference - Federal Ministry of Science & Research (1988) p.74 shows that in 1983/4 the proportion was roughly the same.
30. See Ministry of Science & Research (1988) p.27. Some of the material in this higher education section has been drawn from a small number of useful sources including this publication and OECD (1988,c) both of which would be useful for the reader who would like further information on the area.
31. See Ministry of Science and Research (1988) p.35
32. See Ministry of Science and Research (1988) Tables 8 & 9 and p.36.
33. See Ministry of Science and Research (1988) p.70 and 87.
34. See OECD (1988).
35. See OECD (1992,e) p.106 and pages 127 and 128 on which the above data are calculated.
36 See Ministry of Science and Research (1988) p.35 and OECD (1988) p.24 which incidentally includes colleges of arts and music in the NUS sector. See also *Qualifikation 2000* p.37.
37. See Scott, P. (1985) 'Higher Education the Next Twenty Years' *International Journal of Institutional Management in Higher Education*, Vol.9 No 2 quoted in Clancy (1989).
38. See Qualifikation 2000 p.25 and OECD (1988) p.33.
39. See OECD (1992,e) p.143.
40. See OECD (1992,e) p.110

9 SWITZERLAND

Background and Education

Switzerland has a population of over 6 million, making it one of the smaller OECD countries. It has a small land mass with a reasonably high population density. On a GDP per capita basis it is today the richest country in the OECD. For comparison its ranking in 1830 in GNP per capita was second to the UK along with the US but by 1913 she had drifted to fifth behind the US who now led the ranking.[1]

As with other rich OECD countries she has a reasonably large services sector though not as large, for example, as the Scandinavian countries with their larger public sectors. On the size of her public sector, the current government receipts to GDP ratio is only the fourth smallest in the OECD leaving her with Japan, as the two most private sector economies we are studying here. Finally, her reliance on foreign trade is slightly larger than any of the other four countries.

At present, however, in the third quarter of 1993, Swiss unemployment is at five per cent.[2] Although this figure still leaves Switzerland a relatively low unemployment country, the rate of increase between mid-1991, when it was about 0.5 per cent, and five per cent today, is very high. The Swiss are rethinking their dole system to cope with the new situation. They are also making great efforts at Canton level to introduce changes. These relate mostly to training, and orientation. However, there are no apparent moves to develop a Swiss industrial policy. Swiss firms would probably consider such a development an encroachment on their territory. Whether the Swiss succeed in reducing unemployment to their previously very low level remains to be seen. A basic tenet of this book is that such reduction will be partly determined by whether Swiss structures and society are able to develop a strong

determination to keep unemployment low. What led to the original low level?

Table 9.1: Switzerland - basic data

Population : 6.7m	Area 41,300Km2	Density 163	
Total civilian employment (TCE) 3.52m		*Sectors	A 5.6
			I 35.1
			S 59.3
G.D.P. pc $26,350			
**Government current receipts		34.1	
**Exports +Imports		62.2	

Source : OECD (1991,a)

* %TCE **%GDP

Employment

In Table 9.1 above total civilian employment is a little more than half the population and, on the basis of Fest's data, Switzerland has the fifth lowest employment to population ratio. Switzerland faced the same international constraints as other OECD countries between 1973 and 1984 but her rate of unemployment increase at 1.1 per cent was the lowest in the OECD countries covered by Therborn. The average unemployment from the 1960's to 1973 was to all extent and purposes 0 per cent. The average annual unemployment rate has only once surpassed one per cent since the last war and that was in 1984 when it reached 1.1 per cent. The 1993 unemployment projection at 1.4 per cent is the lowest in the OECD except for Luxembourg.[2] What has led to this low level of unemployment in Switzerland and has it always been the case?

Social unrest and hardship was not uncommon in Switzerland in the last century, especially between the period from 1840-1860. There had also been a famine in 1816/17 when, in the Canton of St. Gaul, up to 41 per cent of the population died. This unrest led to a

fair amount of economic tension between workers and employers. Up to that time divisions existed between the liberals and Catholics but by the outbreak of World War I the line of division ran between industrial workers on one side and middle class elements of both persuasions on the other. Following this unrest, Switzerland became one of the first countries where official measures were taken to protect the worker and improve his conditions of employment. However, effective measures against poverty, unemployment and health risks, only arrived after a long period of conflict which culminated in the General Strike of 1918. As regards the unemployment aspect of these difficulties, the extremely low unemployment of the middle and late 20th century was not always the norm. Switzerland has seen two periods of high unemployment this century. First, between 1921 and 1922 when nearly 100,000 people were without work, representing five per cent of the work force, and from 1930 to 1940 when 6.5 per cent of the workforce was unemployed.[3] If extremely low unemployment, and all the social and economic difficulties which relate to it was not always the norm how then do we account for the present Swiss performance on unemployment?

First, let us look at the macroeconomic factors. Whereas all the other low unemployment OECD countries met the first knock of the mid-1970s oil crisis with an expansionary fiscal policy stance this was much less the case in Switzerland. Following a series of comparatively small deficits in the early to mid - 1970s' government aimed at a return to balanced budgets. During this period, she kept a tight monetary regime. Even recently, in the face of inflation rates of around five per cent she holds a tight monetary stance against any inflationary pressures which may arise from the very tight labour market situation. As a result of this experience, and Swiss fiscal policy since then, the OECD state that the Swiss authorities do not consider fiscal policy to be a suitable instrument for cyclical stabilisation.[4] Recent fiscal outturns showing that the central government account recorded a surplus for the past four years, indicate its ability to eradicate deficits. Her lack of enthusiasm for fiscal policy in contrast to her relative greater use of monetary policy may reflect the realities of her highly decentralised political structure as much as it does any strong attachment to the economic arguments of monetary as against Keynesian economics.

In comparison to some of the other low unemployment OECD

countries, Switzerland's use of labour market programmes was relatively small in the 1970s and early to mid-1980s. The most recent OECD data shows that active labour market measures account for only 0.17 per cent of GDP in contrast to the Swedish and Norwegian data of at least five times that ratio.[5] However some of this difference can be explained by the fact that unemployment was considerably lower in Switzerland than even the low rates prevailing in Sweden and Norway.

The OECD, in one of its Swiss surveys, spent some time considering why Swiss unemployment was so low.[6] The report indicated a number of factors as being important:

(i) First, it stated that the remarkable low youth unemployment is likely to be related to both the absence of a legal minimum wage system and the highly efficient apprenticeship system which has succeeded in integrating young people into the workforce. This system will be covered in some detail later on.

(ii) The extensive use of part-time work during periods of low demand helps reduce unemployment. The incidence of part-time unemployment is strongly cyclical, and in terms of time lost, part-time unemployment reached the equivalent of 50 per cent of the level of full-time unemployment in the 1982 recession. However, since a reduction in working time is quite normal during periods of cyclical slack in all OECD countries, it would be misleading to exaggerate the impact of this factor except to say that it is used more widely in Switzerland than elsewhere.

(iii) The Swiss labour supply is highly flexible to cyclical demand factors due firstly to the never failing of supply of foreign workers. In Switzerland there are four types of residence permits:

- permanent, for settled workers
- annual, for specific jobs
- seasonal, for a nine months period
- permits for frontier workers

When filling jobs employers must give preference to resident job seekers. Workers are granted permanent status normally after ten

years working in Switzerland or, for many European citizens, after five years. The number of settled workers has increased steadily since 1980 and is a majority of all foreign workers. Even in jobs requiring a university training 25 to 30 per cent of such jobs in large and medium size enterprises are held by foreigners, and in high level research laboratories this figure may reach 50 per cent.[7] The number of temporary work permits issued depends on conditions in the labour market. For this reason seasonal and frontier workers are most affected by cyclical fluctuations in the economy.

- Seasonal workers are employed mainly in agriculture, construction and tourism. The return of such workers to their home countries after the termination of their contracts prevents the increase in unemployment which would be caused by such workers if they were to stay and remain without work. If we assume that all such seasonal workers stay beyond their authorised work contract period then average full time unemployment would, at most, have doubled to 2.2 per cent in 1984. This statistic is the upper limit for the possible impact of seasonal workers.
- Frontier workers are those who work in Switzerland but reside elsewhere. When this group lose their jobs they do not increase the Swiss dole queue since they are not residents of the country. They are however, numerically much less significant than seasonal workers. Overall, the Swiss immigration procedures would have to be significantly amended if she were to become a member of the EC.

(iv) Another reason the Swiss labour supply is flexible to changes in labour demand is the cyclical variation in participation rates of the permanent labour supply. The potential labour force has increased continuously since 1960 although its expansion slowed somewhat between 1975 and 1977. In contrast the actual labour force declined up to 1985 because of a fall in the participation rate. The fall in the male participation rate accelerated after 1970. The fall in this, is at least partly explained by the fall in the average retirement age and the delayed entry of youth to the labour market due to their increased participation in higher education. In contrast the female participation rate, after a

sharp four per cent fall between 1974 and 1976, has since displayed a stable trend but at 52 per cent is still below its 1974 level. The female participation rates in Switzerland contrasts greatly with strong increases in certain other OECD countries. It may be partly explained by the increased female demand for higher education and also by foreign women immigrants adopting the more traditional domestic role while their husbands go out to work. Whatever the sectoral factors at work, econometric evidence has confirmed the cyclical sensitivity of the permanent residents, participation rates at least up to the mid-1980s. This sensitivity is especially strong among women. In addition to this, the OECD stated that total employment has shown larger fluctuations in Switzerland than in most other OECD countries and this has been quite pronounced since 1973.

The Swiss industrial relations system is highly decentralised with little direct government intervention. In contrast to the strife prior to World War 2, the labour market has been exceptionally peaceful since then and a widespread consensus exists about industrial relations procedures allowing most disputes to be settled. Industrial peace can be traced back to the 1937 Industrial Peace Agreement within the motor, engineering and watch-making industries. The agreement renounced strikes and lock-outs and decided to settle problems by arbitration. This agreement has dominated industrial relations. Closed shops are forbidden by law but unorganised workers are often required to sign a statement that they will accept agreements negotiated by the trade unions as well as pay a solidarity contribution to the negotiating partners for administration costs. An important element of collective agreements are their peace clauses and in the middle of the 1980s ninety per cent of workers in the private sector were covered by peace clauses.

The levels of direct and indirect tax is relatively low in Switzerland and the tax wedge between labour costs and net disposable income is smaller in Switzerland than in most other OECD countries and is comparable in this regard to the US. The relatively small raft of programmes in Switzerland for regional or industrial development are of little consequence for job creation. Another factor is the payment of unemployment maintenance. The

unemployment payment period is 250 working days maximum. After this it depends to a large extent on the possibility of continuing to receive assistance from the canton. However, the level of canton support varies greatly between cantons and therefore the level of cantonal unemployment varies likewise.[8]

As with the other countries in this volume the Swiss have a strong social commitment to full employment. This did not, as with some of the other countries, originate in the labour movement, which plays a relatively minor role in Swiss affairs. According to some, full employment became part of a bourgeois programme for maintaining general social and economic stability and, along with stable prices and currency, full employment was a basic component of the post-war goals of Swiss society.[9]

Background to Education and Training

A unique aspect of Swiss administration among the OECD world is that there is no Ministry for Education since there is no one school system. This small country with a population of only 6.7 million people has no less than 26 education systems, some of which differ widely. To speak therefore of a Swiss educational system, especially at the compulsory school level, is to succumb to a complete misnomer. The cantons in fact consider their sovereignty in the educational arena as a vital element in their individual identities. The Swiss system of education is, as we will see below, marked by a great variety of structure and form up to, and to some extent beyond, the termination of secondary school. The Swiss educationalist Borel states that as the education systems in the 26 cantons take account of regional, denominational, linguistic and geographic diversities, all aiming at the same educational goals, 'they have on the one hand diversified Swiss schools while on the other they have inspired them with the same spirit'.[10] Eugen Egger rather simplistically referred to this spirit as covering democracy, freedom and tolerance. If this is the narrow remit of Borel's Swiss spirit it is indeed a rather limited creature and we could add to Egger's interpretation that such a spirit is not particular to Switzerland but is shared with most if not all of the 24 member countries of the OECD. It might be more correct to add to Egger's interpretation of this common theme the continuous efforts of the confederation to reduce at least the negative factors related to the

diversity of the 26 different school systems.

Partly because of the variety of educational systems in Switzerland, and the difficulty of having a coherent overview on a countrywide basis, the Swiss have been reluctant to have an OECD review of their education system until 1990. However, the prospect of accelerated integration within the EC had increased the realisation that the supra-cantonal element needed to be strengthened. Thus in late 1991 the OECD published its first review of Swiss education. In this, it states that their education and training system has contributed to the remarkable level of Swiss prosperity. In addition the Swiss are convinced that the close association between economic policy and vocational training has saved their society from youth unemployment and is therefore one of the major factors sustaining full employment. They point to the early streaming process whereby only 23 per cent of children go on to academic upper-secondary school, whereas the rest opt for vocational training either as apprentices at 67 per cent, or full-time vocational at 60 per cent. This process is felt to encourage people to find their ecological niche at a very early stage rather than harbouring unrealistic notions.[11]

The 26 cantons which make up the Swiss federal state are not simply administrative regions in a central state. Each canton is a small sovereign state with its own separate political institutions. The cantons existed as independent states long before the Swiss federal constitution was formed. The first confederation was founded in 1291 by the three original cantons - Uri, Schwyz and Unterwalden - which formed an alliance to carry on their struggle against foreign rule. The inhabitants could hardly be called 'Swiss' but rather were members of their cantons and often waged war on one another. In 1353, there were eight cantons in the confederation, this rose to thirteen in 1513, nineteen in 1803 and twenty two in 1814, three of which split into two half cantons each. Switzerland regained its independence from France in 1815 and organised itself as an independent federation. A federal constitution was adopted in 1848 and extensively revised in 1874. The constitution of 1874 established federal responsibility for trade, defence and legal matters but left a large measure of sovereignty for the cantons. All powers not specifically delegated to the federal government are held by the cantons.

Thus Switzerland, as its present inhabitants know it, only came

into existence as a nation in the last century. In 1854 'Helvetia', the new national symbol, was first seen on a Swiss postage stamp and in the second half of the century attempts were made to create a national ethos through Swiss choirs and sports clubs. Despite the strong centralist tendency of the Swiss state, which has developed over the past century or so, there exists a noticeable tension between state and canton. For example, even today almost all lobbies are organised on a local or cantonal basis.

The development of the Swiss federation has affected the structures and turnout of policy development in many cases including as we will see below, in the education arena. Below the 26 cantons there are 3022 communes which provide their members with extensive opportunity for political participation. The communes are involved, among other things, in certain decisions regarding the school and welfare systems, gas, electricity, water, traffic police and in urban communes, local public traffic. Sometimes communes form associations which deal with matters such as refuse disposal. The most important element in the body politic is the canton.. According to Sigg, they occupy an intermediary and hinge-type position between the commune at the lowest level and the confederation.[12]

The Federal Assembly or parliament consists of the National Council (peoples' chamber, 200 members) and the Council of States (cantonal chamber, 46 members). The Federal Council (or cabinet) comprises seven members from four different parties. This coalition of the same four parties has been in existence since 1959. This is a very long time by international standards. Indeed the government, whose members hold office for an average of ten years is regarded as the most stable in the world. Among the reasons for such stability is that the parliament which elects the Federal Council every four years, cannot vote it out of office between times. There is no such thing as a no-confidence vote mechanism, a fact which other governments may envy. Also no single canton can hold two cabinet seats at the same time and cabinet posts are distributed to take account of linguistic minorities and canton population. Each Federal Councillor heads up one of seven departments covering Foreign Affairs, the Interior, Justice and Police, the Military, Finance, Public Economy and Transport and Energy. General education is covered by the Federal Office for Education and Science (OFES) and comes under the Department of the Interior.

Vocational training policy is covered by the Federal Office for Industry, Arts,Crafts and Labour (OFIAMT) which comes under the Department of Public Economy.

Thus, within the federal government, OFES looks after university and research policy and the upper secondary federal exam or maturite along with study grants and international cooperation. This range of responsibility is very restricted even, especially when compared with the low Japanese private sector based economy where the education ministry has very detailed influence on the education system.

Primary schooling is, and always was, an exclusively cantonal concern. This means that there are sometimes considerable differences in primary education from canton to canton. If therefore a family moves canton it can cause difficulties for the children becoming adjusted to the new educational system. In spite of this variety, the OECD are of the view that Swiss primary education has a tradition of high quality.[13]

At the end of the sixties an attempt was made to standardise some of the basic aspects of Swiss education. The intention was to unify the beginning of the school year, the period of compulsory school attendance, the starting age and the text books. The idea was rejected by the cantons. A much weaker form of standardization was passed in 1985 and became part of the constitution. For example, the school year was decreed to begin throughout Switzerland between mid-August and mid-September.

Children who have to adjust to a new education system if they move to another canton, may also have to adjust to a new language. There are four national languages. About 65 per cent of the population speak German, 18 per cent French, 10 per cent Italian and 0.8 per cent Romansh. In addition some 6.5 per cent, mostly foreigners, have a different mother tongue. The official teaching language is decided by the canton according to the predominant tongue. (e.g. in state schools in German-speaking areas teaching is in German). The first foreign language taught is French in German-speaking Switzerland and Ticino, and German in French-speaking areas.[14]

General secondary education can also vary from canton to canton so that there are differences in the matriculation examinations for entering university. The only branches which are fairly homogeneous are vocational and technical training which come

almost entirely under federal law. The Federal Polytechnical Colleges of Zurich and Lausanne are completely under the federal authorities and the cantons have only limited power concerning the apprenticeship system. The confederation lays down standards of apprenticeship, awards, grants and oversees the enforcement of law. However, the actual vocational training tasks themselves are the responsibility of the canton and this mainly relates to the supervision and organization of the apprenticeship exams. In addition the cantons are responsible for enforcing the federal legislation which gives them wide discretionary powers in this area.

Eight cantons out of the 26 have a university in addition to the Faculty of Catholic Theology in Lucerne. The universities are mainly financed and administered by the canton. The University Support Act of 1969 provided that the Confederation partly finance the development of the cantonal universities. At local level each university does not prepare its own budget but participates extensively in the preparation of the canton's university budget. The canton's parliament decides what funds to allocate to its university.

To return to the overall education and training strategy, Honnegger, when head of the Swiss Department of Economics, explained that Switzerland very early on directed its energy towards manufacturing products which are extremely labour intensive but require a minimum of imported raw materials. Switzerland could be said to have little besides rocks and water. She has no ore, oil or coal and only a quarter of her land surface is arable which does not provide enough to feed her population. In former times, this agricultural, constraint led her surplus population to emigrate or serve as mercenaries abroad. Because of this paucity of natural resources the Swiss have built their economy on the quality of her value added. Kochle says that, since almost all her raw materials have to be imported, this natural deficit can only be compensated for by the skills and service which Switzerland can offer to the world. For this reason he argues that human resources are the most important factor in the Swiss economy. To conclude, we note that a US Department study argued that Switzerland's high living standard has been achieved and maintained partly by having a well educated population.[15] We will now look very briefly at the history of education system.

EVOLUTION AND ORGANIZATION

Initially education, in what we now know as Switzerland, was conducted primarily in monastery schools. In the late middle ages, municipal schools for scribes were founded to meet the needs of trade and administration. Following the reformation many of these schools were retained in the Catholic areas. In the predominantly Protestant cantons, however, they were transformed into public schools at an early date. Following the French Revolution public schools spread throughout all cantons. After World War 2, while several nearby countries developed their education system, Switzerland did not follow this general trend with the same rhythm and speed. This left her somewhat behind in the post-war reform process.

The Swiss system of education is a decentralist one with a different educational structure in each canton. These separate systems reflect, as we saw earlier, different historical experiences and varying cultural and linguistic factors. In addition, cantons vary significantly from an economic prospective. For example, the canton of Zurich is 60 per cent richer, on an income per capita basis, than the canton of Uri and on this point the OECD argues that Zurich's very efficient educational system is responsible for its prosperity.[16] It might be just as correct to say that Zurich's prosperity helps to sustain her high quality education system. Nonetheless, those who argue for the importance of education and its role in economic development, the present author included, would be happier with the OECD's interpretation.

Education System

In this section we will look at upper secondary and tertiary education. First, however we will briefly review compulsory education.

COMPULSORY EDUCATION

Compulsory education is divided into two cycles - primary or elementary and lower secondary or orientation stage. Primary education lasts for six years in the majority of cantons. In the remaining eight cantons it lasts for four and five years respectively

in each of four cantons. In primary schools elementary instruction is given by one teacher in all subjects in unstreamed classes, except where tandem teaching helps occasionally to reduce overstaffing in a few cantons. Because of the language situation in Switzerland, it is probably not surprising that the teaching of a second language begins in the latter half of primary school. For example, in Ticino the second language French is started in the third year of the five year primary cycle.

In cantons where the primary stage takes six years the lower secondary lasts for three years, whereas in the other eight cantons it lasts at least four or five years depending on the length of the primary cycle. A recent intercantonal project, having studied primary education, made what appears to be only very general proposals for convergence at the primary level despite the apparent amount of work put into it.[17] However, it is the lower secondary cycle which contains the greatest variety of structures among cantons. To give some of the flavour of this variety we can glance at the different systems in the following four cantons.

Ticino Canton: Ticino is the only Italian speaking canton and is a mountainous area adjacent to Italy. Although they see themselves as Swiss people, the educational reforms in Ticino have been influenced by the developments of their close neighbour Italy. The scuola media (SM) is a 4 year non-stream lower secondary school for pupils between 11 and 15 years. It is part of the compulsory stage, is free and is operated by the cantonal authorities with the collaboration of the municipalities. The SM is split into two cycles of two years each. First, the observation cycle, where the 11 to 13 year olds have a uniform syllabus and the pupils are observed so as to identify and encourage their individual qualities. Second, the orientation cycle, for those from 13 to 15 years. This stage evaluate pupil's ability and clarifies their academic and vocational interests. Pupils are divided into two sections: those wishing to pursue upper secondary studies; and those wanting vocational training. Pupils, along with their parents, make the choice on the advice of the class council and guidance counsellors but the choice is not final and transfer is possible. Ticino has the following characteristics:[18]

Population	284,400
Language	84% Italian
Per capita income	83% Swiss average
Pupil/Class Ratios:	
Primary	18
Lr. Secondary	19.9

Valais Canton: Pupils arriving at lower secondary in Valais have already had one of the heaviest time tables at primary level of any canton. Its lower secondary stage contains an interesting structure in that it has an orientation cycle (Co) for its 11 to 15 year old pupils. This operates as a group of schools scattered throughout the canton in which all lower secondary pupils are gathered. In comparison to its Geneva CO equivalent (which had its first cantonal government draft in 1927 but did not become operational until the 1960s) the Valais edition did not start until 1974 when it was introduced simultaneously in each of 30 centres.

The main aims of the Valais CO is to improve the information available to assist pupils and parents in their choice of post-compulsory education or training and to provide a solid education and good pupil motivation towards that end. For this purpose, the orientation stage introduced in 1986 provides three streams: 2 year fast, 3 year average and 4 year slow with options to be kept open by counselling and optional subjects.

As a bilingual canton it is interesting to note that at primary level the French speaking areas gear their curriculum towards the curriculum in French speaking Switzerland whereas the German speaking segment co-ordinates with the German speaking part of Switzerland. Therefore, care has to be taken to ensure a consistent cantonal policy respecting both language positions causing some problems of coordination. Valais has the following characteristics:

Population	245,000
Language	60% French 32% German
Per capita income	79% Swiss average
Pupil/Class Ratios:	
Primary	17.5
Lr. Secondary	18.5

Zurich Canton: The total revision of a canton's education law is rarely attempted because it takes much work and effort to get the agreement of all parties concerned. Therefore, according to Blanc and Egger, it is often the preferred choice of cantons to partially revise their existing laws by adding an extra law dealing specifically with a clearly defined component of a canton's overall education system.[19] For example, Zurich canton introduced a 1975 law on school experiments.

The law partially arose out of the inability of Zurich's education system to respond to various new proposals put forward in the 1960s. These proposals were mainly aimed at introducing new structures for improving the integration of the lower secondary school system. In addition, Zurich's legislation on school experiments at that stage was, restricted to curricula content and teaching methods. The 1975 law, however, allows school experiments in education from pre-school to upper secondary education and experimental schools can be created for this purpose. These experiments can last for a specific time only. This law allowed Zurich to experiment with her educational structure.

Zurich today contains one of Switzerland's most differentiated lower secondary school systems. It includes four different streams: lower secondary school, upper secondary, general section and practical section. At present, however, many communes within the canton are finding it difficult to keep up their sections due to falling enrolments and a more flexible structure will need to be found. Zurich has the following characteristics:

Population	1,142,600
Language	83% German
Per capita income	123% Swiss average
<u>Pupil/Class Ratios:</u>	
Primary	19.2
Lr. Secondary	16.5

Uri Canton: This is a small mountain canton in the centre of Switzerland and is one of the poorer cantons. Despite this there is no other country in the world with such a highly organised system

developed for such a tiny population. It is unable, however, to provide the full range of courses, especially after secondary school. It organises agreements with other more educationally endowed cantons to provide its population with access to the full range of educational opportunities. For example, to get a high quality apprentice training, is necessary to leave the canton and once done these young people often tend not to return.

Its geography has a bearing on its primary school year in that Uri's communes can choose one of three different ways to operate its school calendar. This is to meet the needs of Uri's valley population who live from June to September in the higher mountain pastures.

Up to the 1989/90 school year, the transfer from primary to lower secondary depended on an examination which also determined the stream pupils entered. Today in Uri the transfer process is assessed on the pupil's performance in primary, on interviews with parents and pupil and on the teacher's opinion. As with Zurich, the lower secondary school system has four streams - junior high school, higher-level secondary, general and practical.

Despite the high cost of its education system it is felt that it is money well spent in that it is the high quality of its educated workforce which is this small canton's greatest asset. Uri has the following characteristics:

Population	33,800
Language	93% German
Per capita income	77% Swiss average
<u>Pupil/Class Ratios:</u>	
Primary	19.1
Lr. Secondary	16.9

Thus we can see by looking, even as briefly as we did above, at four cantons that lower secondary is quite varied in its form throughout Switzerland. However, to summarize we could say that those students who opt for those secondary streams which meet the basic requirements (called according to the canton - pre-vocational, practical, modern, etc.) are mostly preparing for vocational training. In contrast, those who travel through the more advanced streams are preparing for more advanced vocational training or the academic upper secondary maturite examination leading on to

third level education. The maturite examination is the approximate equivalent of the Irish Leaving Certificate.

In attempting to form an overview of this lower secondary system in Switzerland the CDIP states that the education of the 12 to 15 year olds is the weakest link in the education system.[20] Apart from its summary of segments of the lower secondary school system in six Swiss canton's and a brief but inevitably inadequate overview of its lower secondary education, the CDIP fails to substantiate or elaborate on this important statement. This lapse is made all the more awkward by stating that this is also the case in other European countries. It might on this specific point have made reference to other, work in the area, rather than leave this important point so bare and lonely. Despite cantonal differences, the general approach is early selection on completing primary and this may be compensated for or strengthened in lower secondary. This early selection process is quite similar to the Austrian approach.

Post-Compulsory Education

For an outsider trying to get an overview of the multiform Swiss education system one may be glad to know that uniformity is greater in the post-compulsory stage than in the very varied lower secondary stage. The major unifying force in this respect is the common Swiss wide maturite or leaving certificate exam at the end of upper secondary and the courses which lead to it.

Allowing for differences among cantons there are in all four types of secondary school which follow on from compulsory education - academic secondary school, teacher training, diploma school and vocational school both full and part-time. We first consider the academic secondary school followed by the diploma and vocational school.

ACADEMIC SECONDARY SCHOOL

Academic secondary schools come from a long tradition going back to as the Middle Ages. They provide general academic education up to pre-university level and offer a highly differentiated range of subjects taught in many cases by specialist teachers.

The cantonal authorities normally administer these schools, although they may occasionally be run by municipalities or private bodies. Every canton in Switzerland has an academic secondary school. The federal legislation on these schools includes decrees which go back to 1906 and 1925. The regulations established three types of maturite (A, B and C). However, the most important decree was that issued on the 22 May 1968 (amended in 1972 and 1986). Basically what this legislation provided for is a very specific structure for the Swiss maturite. There are five types of maturite recognised by the federal government as follows:

Types	Class
A	Greek and latin
B	Latin and modern languages
C	Maths and natural sciences
D	Modern languages
E	Economics

All pupils must take eleven subjects nine of which are common ie. first and second language, history, geography, maths, physics, chemistry, natural science and drawing. The pupil then opts for a combination of two extra subjects depending on which one of the above five types of maturite are being aimed for. For type E the pupil takes economics plus another language and for D two extra languages. As a rule pupils matriculate in their nineteenth year.

There is a low success rate in the maturite due to its high academic requirements. Therefore, Switzerland has found it possible to avoid having a limit on university entrance and having a maturite automatically allows entry to university. Due partly to this and in spite of its low success rate, there has been a strong growth in the popularity of the maturite. Since 1970, there has been a large expansion in the number of pupils awarded the maturite from 6,440 to 12,400 in 1987. In addition, the proportion of girls getting the exam has increased from 30 per cent of the total to 45 per cent over the same period.[21] However, enrolments still remain relatively low compared to the situation in comparable OECD countries. This is largely because of the large intake into the dual system and the relatively small contribution of the vocational schools.

Despite the uniformity pressed upon the cantonal high school systems by the federal maturite requirements, there still arises a

reasonable amount of intercantonal variety in this area. For example, Aargau canton runs six cantonal schools and offers its own cantonal socio-pedagogic maturite in addition to the five federal types above. The only type of cantonal maturites which have continued to operate are those which aim at teacher training, as in Aargau, or ones for artistic or commercial studies.[22]

The canton of Valais starts its upper secondary education in the final year of compulsory education and lasts five years up to the maturite. In Neuchatel the upper secondary sector follows the federal model and prepares its pupils for all five maturite certificates. This canton has one of the highest relative levels of maturite success at 16.2 per cent of pupils and it has been noticed that, although the maturite provides direct entry to university, more and more secondary graduates enter the work force or go on to other kinds of study.

Although it would be impossible to provide a comprehensive commentary on the upper secondary system in Switzerland we will make some general points. First, the eleven subjects is, by any standard, a relatively large number of rather varied disciplines and therefore must put considerable pressure on pupils. This pressure seems to be at least partly reflected in the low pass rate which in turn might be seen to reflect a rather high level of resource wastage. The Swiss CDIP refer to the maturite subjects as being isolationist and blinkered. It adds that the teaching of the sciences is too specialised and that the 11 subjects taught are so fragmented and disconnected that the pupils find it hard to assimilate and interrelate them. The result of all this is that with the volume of subjects to be assimilated pupils are not able to reflect on the material and think things out for themselves.[23]

Second, most works in the area refer in one way or other to the corset effect of the maturite requirements on new developments. The legislation in this area took so long to put together, and the structures which support it are so multiformed and diverse, that the end product contains a strong element of inertia.

In spite of the above it should be observed that Swiss upper secondary school places strong emphasis on academic achievement. In many ways it exhibits traits similar to the Japanese aspiration for high academic results and the ethos of effortism which goes with it. However, one were to try and make an intercountry comparison, it might help to classify the Swiss upper secondary system as more

Darwinian in its approach, especially in regard to its low maturite success rate.

DIPLOMA SCHOOL

Prior to and following the Second World War a number of cantons and communes set up general secondary schools operating somewhere between the academic upper secondary schools and the vocational schools. They provided general education which prepared pupils who had completed their compulsory education to be admitted to specialised vocational schools. All six cantons already covered have diploma schools except Uri. These schools provide a two or three year programme leading to a diploma and are called diploma middle schools. The level of education they provide could be referred to as middle maturite.

Originally they were mainly attended by girls, who later on took up courses to train as pre-school or art teachers or go into the social studies or paramedical area. Their objectives were originally indicated in the titles of some of the classes and schools: continuation/ connecting/ preparatory classes, schools for daughters, higher secondary general culture section. However, they nowadays are co-educational and admit freely both sexes.

There was little or no uniformity in these schools in relation to length of course, curriculum, etc. Therefore, in 1972 a study was begun to find ways of creating a uniform structure which would relieve some of the pressure on academic secondary schools and provide a broader range of training possibilities at upper secondary level. This uniformity was not expected to go very far but rather aimed to create minimum degree of commonality. After 16 years the diploma school was given a standard form in 1988 through federal regulations on both the curriculum of these schools and the approval of their diplomas. However, this is still a limited form of uniformity for the 32 diploma schools in the 19 different cantons.

In 1976-77 these schools enrolled 11,434 pupils and this had fallen by over 40 per cent to 6,500 pupils in 1988 which amounts to only about three or four per cent of the number of apprentice pupils.[24] That said, however, they may become more important due to the growing size of the tertiary sector. They will continue to play an important role for those who require a reasonable general education so as to gain access to vocational training in certain

intermediate professions.

VOCATIONAL SCHOOL

Unlike many other forms of education the vocational component in Switzerland is under the influence of the federal authorities. The Swiss constitution states that the federation is entitled to legislate on vocational training in industry, the crafts, commerce, agriculture and domestic service. In addition it refers to matters concerning trade and, under this area, it covers training contracts between trainee and employer. Most vocational education in Switzerland has been regulated by the federal government since the 1930 vocational training law. This law was in turn superseded by a 1963 law. This law covers vocational training in industry, trade, commerce, hotel and catering, transport, and so on. It establishes the legal structure for the apprenticeship system, for advanced vocational training and provides for federal subsidies for vocational training. The cantons were mainly responsible for administering the law although the federal government and unions are also involved.

The 1963 law was superseded by the 1978 Law on Vocational Education. This law does not cover careers in teaching, nursing, social work, science, art, farming, forestry and fishing. Education in these areas is controlled either by separate federal laws or at canton level. For example, vocational training in agriculture was federally regulated in 1951 twelve years prior to the major 1963 law on general vocational training.

However, the 1978 act is important since 85 per cent of boys and 65 per cent of girls doing vocational education finish their courses in accordance with this law.[25] Since there is no Federal Department of Education it lies with the Federal Department of Public Economy (FDPE) to supervise the vocational training under federal responsibility.

The term vocational education covers all types of upper secondary education except general and teacher education and extends into tertiary education. This is the meaning which the FDPE and the Swiss Statistics Office gives it. However, we now deal with the vocational education sector covered by the 1978 Act since as we saw above most pupils doing vocational education do so under this Act.

Under the 1978 act basic vocational training can be acquired in the following ways:

(a) In a state or state approved private business school where the final exam is officially recognised by the federal authorities. Alternatively, in an arts or crafts school where a full-time course leads to an apprenticeship.

(b) By an apprenticeship in a public or private firm supplemented by part-time education at a vocational school.

Approximately 20 per cent of young people trained under this act take option (a) whereas 80 per cent take the dual apprenticeship route which we will look at in the next section. Another 40,000 approximately are receiving a training comparable to that under the 1978 act but which falls under different legislation.[26] The main professions here are agriculture, health, and training in large corporations, such as the railways. Appendix three provides additional information on this area. We now refer to full-time vocational schools.

Full-time vocational schools at secondary level can be cantonal, municipal, or private. They receive financial aid from the federal authorities and often from trade associations. They include the following: trade, industrial, commercial, transportation, communications, design, agriculture and home economics. These schools are referred to in more detail in appendix four.[27]

CONCLUSION

To conclude this section on compulsory and upper secondary we will first look at some federal statistics on actual and projected trends in the pupil population at compulsory and upper secondary level education throughout Switzerland.

Table 9.2: Pupil numbers and enrolment levels in compulsory and upper secondary education.

School year	Compulsory education	Upper secondary
1977/78	905,000	264,000
In %	66	19
1984/85	745,000	323,000
In %	58	25
1990/91	686,000	279,000
In %	57	23
1995/96	690,000	243,000
In %	59	21

Source: OECD (1991,b,41).

Note: The total from which the percentages are taken includes pre-school, compulsory, upper secondary and higher education.

As we can see from the above table upper secondary education holds less than a quarter of the education population whereas compulsory holds almost 60 per cent. However, the compulsory share fell continuously to 1990/91 and is expected to increase slightly to the middle of the decade. In contrast upper secondary's share increased up to the mid-eighties but will fall continuously to the middle of this decade.

Schmid has argued that one of the benefits of having 26 different school systems was that innovations introduced in one canton could serve as a model or testing ground for others. In this context, the OECD argue that the use of comparisons between cantons could improve the understanding of the education system. However, Blanc and Egger take the opposite view following a wide ranging study of Swiss educational initiatives. They hold that each canton is jealous of its autonomy and all that goes with it - such as its education system. Cantons do not willingly imitate neighbouring or even distant cantons, but are rather keen to display originality and take pride in their particular innovations. Their attitudes to lessons from other countries, however, are much more positive and also to ideas generated by international bodies such as the OECD. In support of the latter point, we refer again to how Ticino's education system was influenced by Italian developments. This previous lack of inter-cantonal imitation may now be changed. There is a need for Switzerland to improve its inter-cantonal coordination due, if nothing else, to increased cohesion in Europe.

Apprenticeship System

Switzerland is our second example in this volume of the dual model of post-compulsory education. Along with Austria and Germany it is internationally renowned for its well developed apprenticeship system. In 1970 it had 130,000 apprentices and by the middle of the 1980s this had gone up by over 60 per cent to 211,000 falling back slightly to just over 200,000 by 1988 as we can see in Table 9.3.

Table 9.3 : Number of apprentices in Switzerland

Year	Numbers*
1970	130,000
1979	187,000
1980	196,000
1981	201,000
1982	205,000
1983	210,000
1984	211,000
1985	210,000
1986	208,000
1987	206,000
1988	201,000

* rounded up to nearest 1,000

Sources : Seiler (1973,47) and CESDOC, April 1991, Section Statistique et Prospective.

In 1974 Switzerland had 4.9 per cent of its labour force in apprenticeships, leaving it just below the Austrian and German level. However, by the end of the 1980s, the Swiss figure had increased to 6.0 per cent which now exceeded the level in both of its neighbours. Most of the young people in Switzerland finish their conventional schooling at 16 and almost 70 per cent of any given cohort take up an apprenticeship.[28] For these reasons therefore the interested reader should find what follows a useful introduction to what is statistically the most complete example of the dual model.

ORGANISATION

As we saw above the first major piece of legislation on the apprentice system was in 1963. This law set out the rules on apprentices, master craftsmen examinations and so on. It was followed some years later by a phase of critical evaluation. At that time about two thirds of young people between 16 and 20 were in apprenticeship and a major report in 1971 pointed out that vocational training had lost its attraction for many young people. The process of evaluation concluded with the 1978 law which we covered in the previous section.

In the Swiss apprentice system the state establishes the framework of training conditions and control. In addition, it lays down the regulations on the training arrangements for each trade or profession.

At federal level, as we saw earlier, OFIAMT and its Vocational Education Division is the responsible authority. OFIAMT is part of the FDPE which deals with national economic policy and the labour market and is responsible for foreign trade, industry, agriculture, control of the economy, housing, economic provision for war and labour. OFIAMT's responsibility for labour refers to factors such as emigration policy, unemployment insurance, coordination of inter-cantonal placement services, labour market data, measures to reduce unemployment, training and so on. It is under the latter area that its responsibility for apprenticeship arises.

At the canton level the administrative organ is normally the Vocational Education Office. Under federal law the cantons must ensure inter-cantonal uniformity in the administration of the apprentice system and in many parts of Switzerland the cantons coordinate their work. The cantonal vocational training offices of the German speaking and French and Italian speaking areas meet at conference levels to work out agreements on vocational training. For example, when a course is organised for apprentices from a number of different cantons or when exams are organised inter-cantonally. The canton's vocation education office organises courses, sets exams and ensures that training supervision is carried out efficiently. Below these offices lie the commune to which the canton can delegate certain routine tasks. Whether following on from the canton or the commune one eventually arrives at the vocational schools, the examination boards and training

commissions, which together direct and administer the system on the ground.

Legislation also provides professional associations with a significant and expressly defined role in vocational education. They are viewed as important partners of the national and local authorities. These bodies have been involved in outlining the exam and training regulations and are given control of the introductory courses. A considerable number of duties, especially at cantonal level, are carried out by professional people who are frequently nominated by their associations to do this work. These duties would be similar to their professional duties. Whether such people happen to be employers or employees is not important since strict parity between the social partners is only possible at higher levels (ie. the cantonal vocational education commissions). Professional associations are subject to public supervision and are supported by public funds.

ENTRANCE

An interesting aspect of the Swiss dual system is that it attracts in unequal but sizeable proportions pupils from different social and academic backgrounds and from all levels of lower secondary. Despite this strong traditional attraction to apprenticeship there are, however, some noticeable surpluses in certain areas and some apprenticeships can no longer be filled due to the fall in the number of 15 to 19 year olds. Of those who take up an apprenticeship, 95 per cent carry it out in an enterprise and five per cent in a full-time crafts or applied arts school. The pupils begin their apprentice training at either 15 or 16 years of age and choose one of the 270 trades covered by the dual system. In 1971 only 27 per cent of the trainees were girls whereas in recent years this figure has increased rapidly to reach about 40 per cent today.[29] To help a pupil make the correct choice of a trade within the dual system the normal in-school guidance system is available along with the tenth or orientation year referred to earlier.

In addition, a pre-professional experimental training period is provided by the professional associations or the firms themselves. This introductory course normally takes place at the apprenticeship school and it can vary, depending on the occupation, from a few days to several months, although the normal period is five days.

These courses are provided each year of the apprenticeship and through them the apprentice learns the most up to date working techniques of the trade. The curriculum for such courses is set out by the relevant trade association, but must be approved by the federal authorities. The courses which are normally provided by the professional associations, led the OECD to classify the Swiss system as a three-pillar system - state, firm, associations in contrast to the dual system in Austria and Germany.[30]

The introductory courses arose out of a debate in the late 1960s early 1970s. This was whether the Swiss system should place the apprenticeship under the full-time vocational school system or whether a dual system should continue which could be improved. The then Commission of Experts on Vocational Training decided to keep the combined system of vocational training and at the same time develop the introductory courses which were made compulsory by law.

APPRENTICE SECTORS

Apprentices can be grouped according to the sector they operate in. In Table 9.4 we show how the sectoral distribution has varied from 1979 to 1988.

Table 9.4: Apprentice distribution by sector - Switzerland

Sectors	1979	1983	1988
	%	%	%
Machine, iron & steel	25	25	23
Office workers	18	18	21
Building & woodwork	9	10	10
Sales	9	9	9
Technical professions	7	8	8
Medical care	6	6	6
Agriculture & forestry	6	6	6
Hotel & catering	5	5	5
Food industry	4	3	3
Para-medical	3	3	3
Others	8	7	8

Source : CESDOC, April 1991, Section Statistique et Prospective

Apprentices in the iron, steel and machine sector have declined

relatively over the period. However, the number of apprentices in this sector has only fallen by a small amount. This is because there has been an eight per-cent increase in the total number of apprentices over the period. The largest increase in absolute and relative terms is among office workers who form the second largest category. Little or no change has been registered in hotel, catering or agriculture.[31] The most noticeable fact, however, is the relative stability of most sectors over the period.

APPRENTICE SCHOOL

The apprentice attends part-time compulsory school for a day and a half a week. This may be increased by optional classes which then brings the total to two days. As regards the course content, 40 per cent is made up of general subjects and sport and 60 per cent is directly related to the trade being taken. The course syllabus for each trade is determined by the apprenticeship's regulations issued by OFIAMT and it applies countrywide. The trainee can not be charged school fees for apprentice school training, however certain cantons have charged the training enterprise. The apprenticeship training can vary from two to four years depending on the trade in question.

For weak or backward pupils, the 1978 law provides for a special supplementary course at a vocational school. This course provides additional tuition to help pupils catch up. If the course has to take place during work hours the trainee is allowed to attend with no reduction in salary.

For those young people who choose a manual trade and are not able to complete the theory involved, the legislation provides for an elementary training course. This course includes both the practical and theoretical aspects and the syllabus is not set out in the formal regulations but in the individual training programme. The elementary trainee has the same status as regular employees and on completing the training is given an official certificate. The cantonal authority is responsible for ensuring that only those who are unable to follow the normal training are allowed to take the elementary line.

Pupils who wish to improve their skills can attend courses at an advanced vocational college as long as they have reached a certain minimum standard and have passed an entrance exam. At one extra day a week, these courses supplement the apprentices basic

training and are taken up by about five per cent of apprentices.[32]

In regard to the options for additional courses, either because of learning difficulties or due to advanced training, the apprentices must still be at their enterprise for at least three days a week.

FIRM TRAINING & EXAM

The in-firm component of the Swiss system is similar to the Austrian system. A vocational contract must be drawn up with the company before the apprentice starts the training since it must be lodged with the canton's Vocation Education Office (or equivalent). The contract is authorised only if the firm provides a suitably qualified training tutor to teach the apprentices.

The tutor is either the head of the firm or a specially designated employee whose role is to train apprentices. He or she must meet certain legal requirements and the 1978 law introduced a compulsory course for vocational supervisors. The minimum contents of this course is laid down by OFIAMT. Under law, the tutor can be prosecuted if he or she fails to give the trainee adequate training. In addition, the authorities may withdraw the tutor's vocational licence if necessary. In large firms apprentices often take their complete training on site including the part-time theory training which would normally be given in a trade school.

The in-firm training component of each trade is detailed by federal regulation. In some cases when a certain trade is localised, the relevant canton may be able to draw up the training regulation. As in Austria, the trainee receives wages, regardless of whether he or she is working or at school. The training costs to the firm, along with school fees are covered by the firm.

The tutor is responsible for registering the apprentice for the final exam. Each canton organises its own exams although, as explained above, cantons tend to co-ordinate this activity where possible. In 1987 forty per cent of candidates were girls and sixty per cent were boys reflecting the increase in the female take up of apprenticeship we noticed earlier. In this group 92 per cent of the boys passed and 94 per cent of girls. In Zurich 85 per cent of the apprentices who failed resat the final exam. In addition, about half of these who failed successfully took another apprenticeship.[33]

The exam is an integral part of the apprenticeship and is therefore compulsory. The content contains a theory and practical

component reflecting the school and in-firm contributions respectively. The candidate may have two attempts at the exam. Candidates over 18 years of age may take the exam provided they have spent at least one and a half times the required training period in the trade. The successful candidate receives a federal certificate and in many cases cannot continue with more specialised training in the trade without first getting it.

FURTHER STUDIES

Because of the relatively small number of post-compulsory pupils in the formal education area and given the number of drop-outs in the university sector, tertiary education on its own, is unable to provide the top level qualification strata which is needed for this highly developed economy. As we saw earlier, a large proportion of university level jobs has to be filled by foreigners. What happens then to qualified apprentices, especially the high quality ones? The answer to this is a critical factor in the success or otherwise of the Swiss dual system.

Vocational schools have higher level sections whose courses are attended by a limited number of apprentices on a boosted full-time programme. In some cantons at least a certain number of trainees can go on to senior technician or ETS engineer level (Ecoles Technique Superieures). In the technical colleges the student spends half of the week on practical work and the rest at theoretical studies. Entry to these courses is for persons holding the apprenticeship certificate. According to the OECD, it is at least partly this facility to transfer from a skilled worker to a technician or engineer which helps to explain the high quality of technical staff in Swiss companies. This transition is possible because of the dual system and is in turn one of its main attractions. However, the approximately 5,000 who took these exams are still only barely 8 per cent of the number of apprentices.[34]

Finally, as in Austria, many apprentices leave the firms they were trained in to further their career elsewhere. This process helps to widen the skills of the qualified apprentice. According to the above OECD study it was also reported that some of these skilled workers subsequently returned to their original firm.

COMMENTARY

As with other dual systems the Swiss model has its own internal tensions. On the latter point Ernst Brugger, one of the more notable authorities on the Swiss system, declared bluntly that to 'train an apprentice . . . well is certainly not the major concern of the business firm'. Some time later Switzerland submitted a report to the OECD on apprenticeship costs in which employers argued that the rising level of training costs could lead them to abandon or reduce the level of apprenticeship training.[35] This however has not happened as the most recent statistics on Switzerland show. It is, of course, impossible to provide any sort of accurate cost for the firm's element of training, although a figure of 100,000 Swiss francs per trainee per year has been suggested. In addition, the professional associations also invest considerable resources in out-of-firm training of apprentices. Regarding the cost to the national and local authorities, the table below outlines the relative expenditure in the different areas.

Table 9.5: Distribution of expenditure on vocational training

	%
Vocational schools	88
Full-time school of handicrafts, etc.	9
Introductory courses (subsidies)	1
Final apprentice exams	1
Courses for apprenticeship tutors	>1

Source : Benglen (1989, 14).

From the above, we can see that the bulk of public funds go on apprentice schools, reflecting their role in the system.

The Swiss are fully aware of the fine balance within their apprenticeship training system. According to the CDIP report referred to above, they wish to avoid the danger of allowing their apprenticeship system evolve into something which moves too close to the production process to the detriment of general education. In addition, they are concerned about the need to change the structure of training apprentices to more closely match the skilled workers' need to deal with technical change.

It has been suggested by some that the high level of entrance (85 per cent in some cantons) into apprenticeship does not provide the training flexibility required by a continuously changing economy.

In addition, although there are 270 trades, nearly all apprentices (98 per cent) are in 120 trades with 80 per cent in some 20 trades. Some of the other trades no longer recruit pupils and others have only a small handful of pupils. The OECD wonders whether this system will continue to be suitable for the needs of a flexible economy. Since the larger firms in both the public and private sector provide their own training schemes, this differs from the rest of the ordinary dual system. In Switzerland there is then a two tier training system - one for the majority of apprentices in smaller firms and another for those lucky enough to be taken on by one of the leading firms. The in-house training in the latter only remotely qualifies the person for a dual trade but the companies' proficiency awards from these large firms are still recognized nationally. In the broader education context, the OECD noted the contrast between the very dynamic Swiss economy and the rather static character of its education and training system. An example cited by employers, is the slow introduction of computers into schools.[36]

In the post-compulsory secondary phase we can identify two major education segments and a third heterogeneous grouping. The dominant segment is the apprenticeship system while its smaller gymnasium partner remains remarkably resilient. Between these two established and clearcut sectors lie a variety of smaller types. First, a number of full-time vocational schools for social work, nurses and primary teaching, along with a variety of middle-level commercial occupations for which training is at least partly provided by diploma schools. These non-maturite schools are often of a very high quality and sometimes close to university standard but are, as yet, difficult to classify and are a relatively heterogeneous grouping. On the top of this, there are a group of intermediate level full-time training trade schools leading to the apprenticeship certificate.

To finish this area, a significant attraction of the dual system is the relatively high quality of its training and the availability of an entry into post-dual courses for intermediate and higher level vocational training qualifications. In this context, the Swiss are keen to ensure that the upgrading of skilled workers by improving their Ecoles Techniques Superieures (ETS) and similar bodies. This brings us to tertiary education.

Tertiary Education

The Swiss tertiary education sector contains both university and non-university institutions. Unlike her neighbour Austria, she has avoided having the university as dominant element of this sector. Although the university, at 64 per cent of tertiary enrolment, holds almost double the pupil stock of the NUS, the latter is still quite large due to the fact that its 36 per cent share of total enrolment amounts to a bigger volume of students than this indicates, because of its generally shorter courses and quicker through-put of students. The NUS sector only amounted to 25 per cent of enrolment in the mid-1970s indicating that the relative size of this sector has grown strongly since then.[37]

UNIVERSITIES AND EQUIVALENTS

Switzerland has seven cantonal universities along with a university for economic and social science. The University of Basel was founded in 1460 and Geneva in 1559. The Universities of Bern, Zurich, Fribourg and Lausanne were all founded in the 19th century and the University of Neuchatel at the start of the century. Basel, Bern and Zurich are based in the German-speaking part of the country with Geneva, Lausanne and Neuchatel in the French area. Fribourg is officially bi-lingual and Catholic.

The earlier universities were often based on faculties of theology, especially in the French speaking area of Switzerland. Following the 1844 constitution, education, including university education, became the responsibility of the canton and each canton introduced its own laws. In addition the School of Advanced Economic and Social Studies in St. Gall and the Faculties of Catholic Theology in Lucerne and Chur are university equivalents. The universities award degrees and doctorates along with other special qualifications. Degree courses last at least 4 years and often more.

Buoyed by the growth and development of the sixties and early seventies, detailed plans were made for an additional university each at Aargau, Ticino and Lucerne. Financial considerations thwarted the Aargau plans in 1977 and the other two likewise failed to be established. In spite of this setback the other universities have expanded strongly since then.

From an enrolment of 33,000 in the mid-1960s, they expanded by 140 per cent to nearly 80,000 at the end of the last decade. This fast growth rate was at least partly related to the high birth rate at that

time and the rise in the ratio of females attending university. Switzerland has an average of one university or equivalent for each 600,000 inhabitants, leaving her with one of the highest university densities in the OECD. However, the actual number of students in these institutions in proportion to the population is relatively small. In addition, barely one tenth of all 20-year olds today go into higher education.[38]

Along with the universities, there are two Federal Institutes of Technology (EPF) at Zurich and Lausanne. The Zurich Institute was the first federal educational institution in Switzerland and was founded in 1855. Its Lausanne equivalent was founded in 1853 as a private technical school. In 1869 this was incorporated into the Academy of Lausanne which later became the University of Lausanne in 1890. In 1969 it was taken out of the university and transferred to federal control as the Federal Institute of Technology at Lausanne.

Both institutes provide courses in engineering, physics, chemistry, architecture and so on. They are significant elements of the higher education sector and are allotted four per cent of the federal budget. In addition, they hold approximately 16 per cent of the student population and employ 18 per cent of the teaching staff in higher education. Depending on the particular specialization, between 45 per cent and 68 per cent of the scientists and engineers working in Swiss industry have been trained at an EPF.[39] Both institutes set courses which end with a diploma after which one may study for a doctorate.

The change in the number and levels of students in both the university and NUS sectors is shown in the table 9.6.

Table 9.6: Student enrolment in higher education

School year	Numbers	*% of pupil population
1977/78	75,000	5.4
1987/88	122,000	9.6
1990/91	114,000	9.4
1995/96	95,000	8.1

Source: OECD (1991,b,41)

* This total includes pre-school, compulsory, upper secondary and higher education.

As we can see, the number and level of pupils in higher

education increased up to the 1987/88 academic year and since then has fallen, and is expected to continue falling, to the middle of the decade. Therefore, the significant role of foreign university level staff in the Swiss economy which we referred to in our earlier discussion on employment, can be expected to continue on the basis of these projections.

ORGANIZATIONS AND FINANCE

According to Eliasson higher education enjoys a greater degree of independence in Switzerland than elsewhere.[40] The 1983 Research Act explicitly restates the traditional freedom of education and research which has always existed in this area. The universities and the federal institutes are in essence self-governing bodies. In broad terms, the general administrative and financial matters are decided by the cantons, in the case of the universities, and by the Federation, in the case of the EPF.

During the growth period of the 1960s, the increased expenditure on the universities by the seven university cantons put significant pressure on their finances. These cantons provide university education for the county as a whole. Therefore, the need for a more equal sharing of the burden became an important item of discussion. In 1969 the University Support Act came into force. This dealt mainly with federal funding for the universities and the encouragement of inter-university coordination. The Act makes subsidies dependent on a certain amount of coordination but it did not affect the sovereignty of the seven cantons in regard to their university. In order to improve on the 1969 Act a new act to allow the federation to provide more resources and to improve the structures was put forward in 1978. This however was rejected by referendum in 1979.

As regards funding at university level, the universities do not prepare their own budgets. However, they are significantly involved in the preparation of the cantons university budget. The parliament in each canton, however, makes the final decision on what funds to allocate. Funding from private sources, particularly for research, is of minor importance to the seven universities and this is most likely because the relatively weak links between them and the private sector. In contrast, private funding for the Federal Institutes of Technology is somewhat more important. This is due

in part, with the fact that the EPF are relatively stronger in science, and particularly the applied science areas. Therefore, industry is more inclined to go to them for research and development work.

The two Institutes of Technology, as federal bodies are directly responsible to the EPF board, which in turn is responsible to the federal government as a whole rather than to any one department. The head of the Federal Department of Home Affairs acts as a spokesman for the EPF Board in its dealings with the federal government. The Board is elected every five years by the government.

Non-university sector

The NUS sector includes such areas as teacher training, technical education, commercial and administrative education. The following table provides an outline of enrolment in this area.

Table 9.7: Enrolment in higher vocational schools.

Type of institution	Total enrolment in 1986/87	% in part-time education	% increase since 1977/78
Engineering schools ETS	9323	23	28
Schools for social workers and specialised teachers	2077	56	64
Higher schools for business and administration	1284	12	67
Higher domestic science schools ESEF	154	-	-
Total	12838	27	38

Source: OECD (1991,b,98)

As we can see the sector is dominated by the ETS schools followed by schools for social workers, specialised teachers and

business administration.

HIGHER TECHNICAL COLLEGES (ETS)

An important component of the NUS are the 25 ETS or Higher Technical Colleges. These train engineers, architects and other professionals.

The roots of the ETS go back to the end of the last century. By 1907 there were seven and this had increased to 10 by the 1960s. In 1963 their old 'technician' name was abolished and they were given their present name. They are located mostly in the northern half of Switzerland. Entrance to one of these requires a post-apprenticeship certificate, a technical baccalaureat, or a maturite along with a year's on-the-job training. Entry requirements are not established centrally but locally by the different institutions. Fifteen of these schools are full-time and the rest are part-time evening schools whose pupils have a part-time job. The full-time ETS schools are normally run by one or more cantons. These provide courses lasting a minimum of at least three years. The part-time ones provide courses over a four or five year period, are more directly linked to the corporate sector, and are often run or supported by trade associations. They are an important part of the NUS sector and they provide three times as many graduates as the EPF sector and in similar areas.

The Vocational Training Act empowers the federal government to subsidise the ETS provided it operates on a non-profit basis. The funding varies from 27 to 47 per cent depending on circumstances.

The ETS colleges provide a wide range of courses which are of a highly practical nature. They provide for six traditional engineering disciplines, including building, chemistry, civil engineering, etc. They provide a variety of specializations including nuclear, medical and chemical engineering and such areas as viticulture, horticulture, city planning, information technology and so on. An ETS student does a grounding in general technology and, after an intermediate exam, he specialises. Having completed the final exam he is entitled to describe himself as an engineer ETS, civil planner ETS, etc. An ETS graduate may go on for advanced courses in the form of post-diploma or continuing education courses. The former normally takes one year full-time or two years part-time. The latter are run by the eight night colleges

and usually take several weeks. For some time now the ETS schools have been increasing their intake into these courses, especially in the post-graduate areas in topics such as electronics, energy technology and management.

ETS staff have a heavy teaching load with 20 classes or more per week. The ETS do not normally get involved in scientific research, except on occasions. In contrast, they get involved in experimental and development projects and much of this work is carried out in close co-operation with industry. Several innovation and technology centres have been formed in recent years within the ETS or jointly with them.

OTHER NUS INSTITUTIONS

Another component of the NUS is the technician schools which provide practical courses for middle level management. These schools arose out of the need to produce highly trained technicians somewhere between the vocational school product and the graduate engineer technician. The 1978 Vocational Training Act had a section on standardising these schools and graduates from them can use the title 'TS'. In 1975 there were 20 such schools and today there are 37.

In addition to the above there are Higher Schools of Business and Administration which provide management training. They were set up to provide advanced training for graduates of commercial apprenticeships, holders of diplomas, or maturite certificates from commercial schools who in addition had extensive business or public administrative experience. There were six such schools in the late 1970s and today there are 10 with new schools being set up. These schools are generally dependent on the cantons but they are approved and supported by the federal government.

Finally, there are a group of specialised schools which include higher schools of:

- hotel, catering and tourism;
- domestic science;
- arts and crafts and fine arts.

There are also ten schools of social studies and fifteen of special education most of which are privately owned and are funded by relatively high fees and some government grants.

ENTRANCE / EXIT

About half of upper secondary graduates start higher education straight after the end of school. This increases, later on, to approach 80 per cent of all secondary graduates. There has been a 30 per cent increase in higher education enrolment over the last ten years with the proportion of foreign students at 18 per cent, which is quite high by international standards.

As regards employment, about seven per cent of the labour force are university graduates and, as we saw earlier, 25 to 30 per cent of university positions in large and medium sized firms are held by foreigners. This latter figure reflects the high dependency on foreign nationals. Switzerland is quite reliant in this respect on the employment of foreign scientists, engineers and other technical staff.[41]

Commentary

The tertiary education system in Switzerland is, apart from the EPF sector, a relatively decentralised sector both in its control and management and in its conception and development. In most, if not all, OECD countries the universities predate the growth of the welfare state and central encouragement and direction of society's institutions. However, their operations have come under strong central attention in some countries between the end of the 1950s and the early 1970s.

As we saw earlier Sweden and Ireland marked this trend partly at least by the development of U68 and the HEA respectively in the 1960s. In contrast, the boom conditions of this period strengthened not so much the state's encouragement or direction of the university sector in Switzerland as its better coordination. For example, the Swiss Council of Sciences was set up in 1965 as an advisory body to the federal government on science policy. It had two permanent working parties dealing with university policy and research policy. More importantly, the University Support Act in 1968 included an incentive for increasing co-operation both between the universities and on research and education. This function was then delegated to the Swiss University Conference. This effort at coordination was followed a year later by the federation taking over the Lausanne EPF.

Therefore, what in other countries became increased centralism, in the 1960s in Switzerland became better coordination. The administration and control of the Swiss university is a good example of the powerful decentralism of its overall society. Yet there are pressures for greater central direction and countervailing forces resistant to such change. These two opposing forces are identified in a variety of sources including Swiss official documents and learned publications by Swiss commentators. However, for its clarity of contrast, nothing matches in recent years at a similar level and on a similar topic the OECD review meeting in Berne on the 30th March 1989 on the national science and technology policy in Switzerland. The three OECD examiners included a senior civil servant from Australia, an advisor in the Swedish government and a senior manager in Philips, the Dutch multinational.[42]

The Australian examiner opened the review discussion by noting that Swiss resistance to change was partly due to federalism and was one of the salient features of the Swiss mentality. He argued that certain sectors of the economy could benefit from more state aid especially in the research and development area. In addition, greater national commitment was necessary in priority research fields and in this respect the new technologies were not receiving adequate support. The Federal Office for Education and Science needed more funds and a Secretary of State or equivalent with specific responsibility for science and technology. Better coordination was needed in the area at federal level along with an improved data base.

The Swiss Secretary of State replied by rejecting the report's recommendations. First, because the recommendations of the examiners were based on an interventionist and centralist model which was incompatible with the federalist structure of Switzerland. He added that a liberal model of state economy relations had been the moving force behind the OECD Convention. He argued that while the state had responsibilities in defence or foreign policy, science and research were a matter of individual ingenuity for which the federation could not substitute. The only government role here was to establish framework conditions which would guarantee individual fulfilment in the area.

The Dutch examiner disagreed and said that the science and technology area should be a government responsibility just like defence or foreign affairs. The Australian supported this by saying

that this area was as important to national survival as national defence. Meanwhile, the original Swiss speaker had drawn strong support from the Director of the Federal Office of Cyclical Policy Matters, who said that the examiners' views conflicted with the subsidiarity principle and ran counter to the devolutionary trend in Switzerland.

The President of the Swiss Council of Science however indicated her agreement with some of the examiners' ideas and suggested that the criticism levelled by the Swiss delegates should be qualified. And so the discussion went with a slight reduction in polarity of views in the later stage of the meeting. The relative sharpness of this discussion indicated powerfully the difficulty for the Swiss, not just in the R and D area, but also in university education and other areas, of going beyond the 'improved coordination' approach which developed in the economic prosperity of the 1960s. The one exception to this of course is the EPF sector of tertiary level and the vocational education sector in general.

There still could be greater cooperation between the seven universities and the two EPFs. The OECD have argued here that every subject does not need to be taught at every university. In addition, they also argue that industry-higher education links are weaker in Switzerland than in many other OECD countries. For example, Switzerland possesses no technological parks. As we will see elsewhere, Japanese universities have the same experience in this regard and their universities tend to remain relatively aloof from industry except, as in Switzerland, on the basis of person to person informal contacts.

In regard to the NUS, there is no central coordinating agency, thus allowing for possible duplication of courses. Having said this however it is noticeable that the technical schools, and especially the ETS, have been praised often for their contribution to Swiss post-secondary education. Bottani et al stated that the higher schools of specialised studies do not receive the degree of recognition among the public which would be commensurate with their real importance to the economy and are somewhat overshadowed by the universities.[43] The OECD argue that the ETS are a valuable asset and their significance may be underestimated. These colleges can play a useful role in providing technical assistance to industry, especially SMEs. Therefore, their staff should

not in effect be regarded as school teachers and should have their hours reduced. They produce 60 per cent of technical personnel in contrast to only 33 per cent trained by the two EPFs. In addition, they are an educational sector which could provide very useful technology transfer and innovation services for small business and some ETSs have been experimenting in this area. In this regard a number of technology and innovation centres have been formed in recent years within the ETS or in co-operation with them and in this way they are trying to develop links with small scale industry. These colleges are so popular in some cases that they cannot accept all qualified applicants due to the growing Swiss need for ETS engineers.[44]

Finally, like Austria and Sweden, the Swiss tertiary sector will need to take account of EC developments. However, whereas the potential short to medium term impact here on, for example, the Austrian NUS, could be relatively significant, there are no significant signs of anything similar in regard to the Swiss. They in fact find it hard enough to form common coordinating structures for their tertiary education structure, never mind trying to in any way match their university-NUS structures to suit European developments.

NOTES TO CHAPTER 9

1. It is interesting to note that the UK dropped from first in 1813 to fourth signalling its early move to where it now lies at eighteenth position (Kennedy, 1988) p.14 and (OECD), 1990,a)
2. See Fest (1990) p.50, Therborn (1986) p.44, OECD (1987) and OECD (1992,c) p.40. I am grateful to Loretta de Luca of the ILO for her advice on the Swiss unemployment situation as at 4 August, 1993.
3. See Levy (1986) and Fahrni (1983).
4. See OECD (1987) p.38 and OECD (1988) p.58.
5. See OECD (1990) p.53
6. This refers to the 1986/87 survey.
7. See OECD (1991,b) p.29.
8. See Santanamarta (1991) p.2.
9. See Therborn (1986) p.110
10. Quoted in Egger (1984) p.7.
11. See OECD (1991,b) p.94.
12. See Sigg (1987) p.19
13. See OECD (1991,b) p.74
14. See OECD (1990,d) p.2. As regards religious differences: 47.6% were Catholics and 44.3% were Protestants in 1980.
15. See Swiss office for the development of trade (1981) p.4. Kochle (1985) p.69 and Bodenham (1980) p.2.
16. See OECD (1990,d) p.11
17. See OECD (1990,d) p.11.
18. See OECD (1990,d) p.38 which contains more information on Ticino and which provides much of the information for the remaining cantons.
19. See Blanc and Egger (1978) p.69.
20. See OECD (1990,d); CDIP stands for Conference suisse des directeurs cantonaux de l'Instruction publique.
21. The success rate was 11% in 1985. See Egger (1984) p.26 and OECD (1990,d) p.23 and 39
22. See Egger (1984) p.29.
23. See OECD (1990,d) p.14 which was prepared by the CDIP.
24. See Bodenman (1980) p.14. OECD (1990,d) p.25 and OECD (1991,b) p.84.
25. See Dommann (1984).
26. See OECD (1990,d) p.19.
27. The material in appendix 4 is based on Bodenman (1980).
28. See Blanc and Egger (1978) p.93 and Arthur Schmid above in (1991,b) p.159.
29. The above data is derived from OECD (1979) p.25, OECD (1990, p92, OECD (1991,a) Basic Statistics - Switzerland and OECD (1991,b) p.79.
30. The above data is taken from Benglen (1989(p.2 and Federal Office for Industry and Labour (1972).
31. See OECD (1990,d) p.17 and OECD (1991) p.96.
32. See Benglen (1989) p.8.
33. See OECD (1990,d) p.18 and 21.
34. See OECD (1991,b) p.83.
35. See Brugger (1975) p.5.
36. See OECD (1991,b) p.61-62, 121.
37. Data based on OECD (1990,d) p.39 and Bodenman (1979) p.5.
38. Data above based on OECD (1990,d) p.30 and OECD (1989,d) p.48.
39. Data above from OECD (1989,d) p.57.
40. See OECD (1989,d) p.25.
41. The above data are based on OECD (1989,d) p.49 and OECD (1991,b) p.29.
42. The full details of the review meeting are on p.119 to 139 OECD (1989,d).
43. See OECD (1976) p.77.
44. See OECD (1989) p.19, 65, 66, 101 and 128.

10 OVERVIEW

This chapter provides an overview of some of the main points in the study. This is followed in the final chapter by a number of recommendations based on reflections on the experience of these five low unemployment countries.

The five countries covered could not be more varied in many respects. From the highly populated Japan to the sparsely peopled Norway, from the decentralised Switzerland, to the relatively centralised Sweden. The level of state involvement varies from high in Sweden and Norway to low in Switzerland and Japan. Although, on a per capita basis, four of the countries are among the five richest in the OECD, Austria lies more than half way down the group. While all five rely on foreign trade, Japan's total trade to GDP is much less than the others, who in their own population bracket are not nearly as reliant on trade as such countries as Belgium, Ireland or Holland, all three of which have suffered from relatively high unemployment.[1] Finally, all except Japan, are located in Europe and none are yet members of the EC. However, formal negotiations on membership opened for Austria and Sweden on 1 February, 1993 and for Norway in March.

Switzerland, meanwhile, has in effect left her EC application to one side for the moment, following the Swiss peoples rejection of the European Economic Area referendum on 6 December 1992.

Overview

This section provides an overview of some of the reasons why the five have had low unemployment. This is followed by an overview of the learning structures in the five and includes some background points, followed by formal and adult education, workforce and in-firm training.

GENERAL REASONS FOR LOW UNEMPLOYMENT

First, the most notable common theme in all five countries is the strong political and social consensus in maintaining low unemployment. In all cases this appears to have arisen from a difficult period of unrest or societal concern associated with unemployment. In Sweden, the journey towards the consensus was assisted and informed by economists and benefitted from the education process within a variety of groups including the trade unions and study circles. In some cases, the priority attached to employment is underlined in the constitution, while in others it is reflected in legislation. In Austria the Ministry of Labour and Social Affairs has the role of helping to prevent unemployment. In those countries with a strong corporatist structure, the low unemployment approach is shared by all social partners, if somewhat more strongly by the unions. In Japan, on the other hand, it is operative and easily identifiable at firm level. In all five, the goal of full employment permeates society and public concern is immediately raised if the dole queues begin to rise. Even in Switzerland, with an unemployment rate of around one per cent, the fight against unemployment remains a dominant theme in economic policy.[2] However, any of the five countries could allow themselves to drift from their attachment to the jobs consensus, which itself could have its own jobs impact.[3] In addition a very serious world recession or other such difficulty could strain this consensus.

Second, each country has approached unemployment in its own way and varied its approach according to circumstances. The lesson here is that the determination to deal with the jobs issue is often as important as the particular method used. For example, in Switzerland its labour supply was noted to be of the type highly responsive to cyclical demand in contrast to Japan with its low supply sensitivity. The former's situation was related mainly to its foreign labour supply whereas in Japan it was due to labour hoarding and the large overtime leeway available.

Third, all five countries are at present outside the EC, which in recent times has had a poor record on unemployment - it rose from 8.0 per cent in 1990 to 8.3 per cent in 1991, 9.5 per cent in 1992 and is projected to rise to 9.75 per cent in 1993. To turn countries such as Ireland, Spain, Italy, Greece, France or the UK into low

unemployment economies needs more in the EC context than exists at present.[4] The further integration of these countries into Europe perhaps may act as a spur to increase their own individual efforts to reduce unemployment. But, the integration process, as it operates at present, will itself do very little to reduce their individual unemployment problems. Other factors must also be at work.

BACKGROUND

Learning plays an important role in all five societies. Despite the variety of educational systems in Switzerland, and the late arrival of elements of Norway's education, the focus on education today in both countries is significant. In Austria, it is held in much higher regard than wealth, and education credentials are a major part of the social pecking order. Japan's fierce competition among its children for a good general education transfers into a relatively determined effort by its adults to acquire information. Sweden takes its education and training rather seriously and their approach has traditionally been a very centralised and uniform one. It is also a relatively participative system and in their own integrative way they have attempted to build it into their full-employment ethos.

All five countries have proven to be effective learners of foreign experience. The Japanese made the decision to inspect other countries' methods over a century ago and were exposed to certain American ideas following the last war. It is ironic that this process is now repeated in the opposite direction by a variety of countries looking at Japanese methods. This focus today, however, arises mainly out of the West's concern with losing its trading supremacy and concentrates on competitive factors. In contrast, Japan's inspection of Western methods a century ago entailed a wider range of topics, including political factors. Both Norway and Sweden have been relatively effective at accessing the ideas of the international community and such bodies as the OECD and the Council of Europe. In the case of Norway, in areas where she has little or no experience herself, she was able to access the pool of international experience.[5] The Swiss with their foreign language facility are also noted participants in the international policy community. However, their decentralist system inhibits the easy absorption nationwide of foreign ideas. These tend to be more speedily utilised at cantonal level. As we have seen, Swiss cantons

are less inclined to take ideas from other cantons than might be expected - an example of the old adage about failing to be a prophet in one's own federation.

Regarding the pace or pattern of reform, the Swedes have taken a more continuous rolling reform approach. In contrast, the Austrians have taken long periods to come to decisions on their education system reflecting not just political realities but also a strong desire to get things right. In Switzerland reforms operate at two levels - the slower and more cumbersome federal level and the cantonal level. In Japan the pace of reform and innovation has varied over time. During both the Meiji and post-war period, Japanese education and training underwent some fundamental changes. Since then, however, there has not been any large modification to the education system and vigorous government efforts to implement sizeable change since the 1970s have met with significant resistance.

Education System

The primary, and in particular the secondary education systems, vary noticeably between the five countries. The 1964 and 1974 decisions, in Sweden and Norway respectively, to introduce comprehensive secondary school systems were watersheds in the development of the educational systems in both countries. Prior to this both countries had a variety of school types each providing for different pupil groups.

Japan attempted to develop a comprehensive upper secondary sector shortly after the war but this failed, partly at least, because of the influence of the universities, and in particular, their entrance requirements. Today Japan has in effect an imbalanced dual track upper secondary, dominated both statistically and hierarchially by the general academic stream. Even in the smaller vocational sector, half of the graduation credits are in general subjects and the emphasis is on the theoretical content rather than the practice or application.

Austria has a variety of upper secondary school types. Pupils make important streaming decisions early in Austria, after which the various routes are relatively watertight. This puts considerable pressure on young people and their parents to make the correct decisions relatively early in their schooling. There are three broad

options in upper secondary: general; vocational medium or higher; and apprenticeship. The vocational wing dominates this level and the apprentice area holds half of all vocational enrolments. The full-time vocational schools have been recognised internationally for their excellence and for the link, through their leaving certificate, with tertiary education

Switzerland must be the researcher's paradise with its wide range of educational systems. No other country provides such a variety of approaches within such a relatively small population. And no other single OECD country puts paid so effectively to the questionable search for the perfect education structure which neglects the interface between its technical structure and the traditions of a society, its economy and level of development. The Swiss have a varied primary and, in particular, lower secondary system but its federation has had some success in reducing the diversity of its upper secondary. The four track upper secondary contains the academic school, the diploma middle academic school, the vocational school and apprenticeship. Despite the cantonal variation there have been some developments at federal level, particularly, in the vocational area. However, federal innovations take long periods of time to gestate leaving the Swiss federal system with a strong tendency to inertia. Austria has a somewhat similar level of inertia but for completely different reasons. In her case educational laws are classed as constitutional matters with any amendment requiring a two-thirds majority in parliament.

TERTIARY EDUCATION

The five countries vary quite noticeably in the structuring and operation of the tertiary sector and in the regard in which it is held. Norway, Japan, Switzerland and Austria have binary systems which contain varying sizes for the university and non-university sector. In Norway, the NUS university split is 60:40, in Japan it is 40:60, in Switzerland 34:66 and in Austria it is 10:90. In the latter two countries the low NUS enrolment share masks its relatively high contribution to tertiary graduate output. This is partly because of its shorter courses, and in Austria also because of the high university drop-out rate.

Sweden had a binary system in the 1970s but in 1977 it created a unified structure under a central government supervisory agency,

the UHA, and developed a single third level institution, the hogskola. Within this unitary system we still have the sectoral enrolment split between administrative, economic and social work professions holding a quarter of the student population, technical professions with a fifth of enrolment and a range of other professions taking up the remainder. The process which led to this system arose out of a variety of pressures including the desire to move tertiary education nearer the labour market and improve the socio-economic spread of students .

The role and significance of the university varies considerably. Austria, with the oldest university tradition, had its prestige somewhat weakened in recent times and this can be partially traced back to the ambivalent position of a majority of its staff between the two wars. Switzerland, with a similarly long university tradition, has a thriving university sector with a strong independent status. However, her university enrolment density is still relatively small internationally. Norway and Japan are recent arrivals in the university sphere but here the similarity ends. Norway's universities have been the subject of some criticism for their failure to match the vibrancy of her NUS sector. In contrast Japan's even later arrival of her university failed to impede its progress to where it now lies at the unassailable apex of the Japanese pupil's ambitions. This ordering of things appears to be less determined by the quality of its university product than by the attachment of employers to recruiting new graduates from particular universities.

The roots of today's NUS sectors in Norway, Japan, Austria and Switzerland for the most part go back to the last, and in particular the end, of the last century. Norway's relatively clearly defined NUS did not exist as it is today prior to the 1960s. It then underwent a process of structuring and definition between 1969 and 1982. Since then there has been a process of stabilisation. The earlier debate on definitions and roles has subsided to be replaced by a concern for consolidation, a reduction in numbers and greater inter-institutional cooperation.

Japan's more heterogenous and less clearly defined NUS sector had its more recent classification in the 1950s to 1970s period. The founding of the Junior Colleges in the 1950s was followed by the College of Technology in 1962 and more importantly the Special Training Schools in 1976. The relatively small NUS sector in Austria is mainly the result of the 1962 school legislation, except for certain

sectors such as social workers and compulsory teaching. Switzerland's less well defined NUS sector has had much of its present components reclassified or standardised in the 1960s and 1970s and the Swiss federation has been most successful in exerting its influence in the vocational sphere. Consequently outsiders looking at the Swiss education system will find much less inter-cantonal variation in the vocational sector than the non-vocational sector.

EDUCATION-WORK LINKS

The level of contact between education and work varies noticeably from country to country. Sweden encourages the involvement of the community and business world as early as primary and lower secondary. In the last two years of compulsory schooling pupils do a total of five weeks work experience in a variety of work sectors. The growing role of apprenticeship in Norway has increased the education sector's involvement in the world of work, reversing a trend which saw its apprenticeship decline continually up to the 1980s. In Austria and Switzerland we have two examples of the fully fledged apprenticeship system. All of the above four countries have well developed vocational school sectors providing education, in some cases, to the level of the highest academic stream. Regarding the tertiary sector Norway, and in particular its NUS, has relatively strong work college links. This is not unrelated to its significant regional structures where local colleges are encouraged to be part of the local economy. In addition the older age of the Norwegian and Swedish third level student reflects greater college-work mobility.

Japan's education sector has, by contrast, relatively weak education-work links and appears to have no great concern for involving pupils directly with the world of work. At one time she had a reasonably developed apprenticeship system which was transferred into the school sector at the end of the last century. Because of dissatisfaction with the product it evolved into a technical school system and later into miscellaneous and then special training schools. In the work sphere the firms themselves, partly because of the lack of an apprenticeship system or a strongly work integrated vocational school sector, have developed their own in-firm training structures, which we spent some time looking at in

chapter 7. The general education area is by far the larger element of the secondary school cycle. However, even in Japanese vocational school's the theory element is the main focus of attention. At tertiary level, the NUS sector is the second choice of the vast majority and her university-work links are relatively undeveloped. In this latter context, she is similar to Switzerland whose industry-higher education links are also weaker than in many other OECD countries.

Sweden compensates, if that is the right word in the context, for its lack of apprenticeship by its highly developed full-time vocational sector, along with its adult education and workforce training system. It also has a reasonably well developed in-firm training support system.

ADULT EDUCATION

We dealt with adult education only in Norway and Sweden. There was either little or no information about it in the other three countries and it was relatively less interesting internationally. Swiss adult education has no legally defined status and no national agency for coordinating or supporting it, although the Federal Office of Cultural Affairs supports one of its components. Nestler states that it has, despite being often ignored by the public, proliferated in diverse organizations and institutions until it has become today a tangled growth in the educational landscape.[6] She explains that the lack of information on the topic in Switzerland has been because it is organized privately and unofficially and because there are few full-time staff, very few relevant research projects and no comprehensive statistics.

Austrian adult education was also the result of individual or group initiative. The more important groups were workers' associations along with a few key 19th century figures who were inspired by humanistic motives. As with Switzerland, there are numerous providers today, including public bodies and a number of private organizations and associations. The Federal Ministry of Education, Arts and Sports set up a special division for adult education and under a 1973 act it is responsible for financially supporting adult education associations and bodies. It is also in charge of seven federal adult education centres in seven provinces along with the Federal Institute of Adult Education at St. Wolfgang.

Thus, in contrast to the Swiss system, the Austrians have a type of centralised structure giving this area some sort of uniformity.

In the standard international works on Japanese education we see no clear reference to adult education. Even if we take the concept of recurrent education, we still find it difficult to gain access to the Japanese context. The recent substitute appears to be the concept of lifelong education, with its Japanese translation of Shogai Kyoiku. This was first introduced in 1965 and since then has been receiving academic and policy attention.[6] The reader should not however conclude that Japan is in some way deficient because it has not recognized or conceptualised in the same way as certain other OECD countries. The amount of education taken by Japanese adults for hobby or vocational purposes is substantial. However, this occurs without the existence of a central adult education agency and without even the presence of the concept.

Like Austria and Switzerland, Norwegian adult education was developed by private initiative. However, for various reasons, it had become quite developed by the 1950s. Because of this, the state decided to become involved, leading to the 1965 and 1976 developments. Had Norway a smaller state sector like the Swiss or Japanese it might be argued that it would not have developed to the level it has today. However, this is not necessarily the case if we consider the Japanese public sector's ability to encourage an important activity, with minimum state expenditure, through introducing stipulations, minor incentives or coordinating agencies. Norway's adult education is today the most comprehensive in Europe covering everything from formal adult education to post-work education including workforce and in-firm training.

Swedish adult education also has its roots in the voluntary initiatives of the last century. As in Norway, it grew strongly from the 1950s with the growth of government support. Its study circles had already become quite developed at this stage and, following the 1962 reform of the school system, the state introduced the municipal adult education structures in 1968 in order to reduce the education gap between adults and young people.

In contrast with Norway, with its comprehensive approach to the various components of adult education, Sweden's study circle movement was discomfited by the arrival of the new municipal activity. Sweden has, however, made considerable efforts to ensure that its adult education facilities are attractive to those with weak

formal education. In recent times, there has also been an increased emphasis on making municipal adult education more relevant to the labour market by involving it in company education.

Adult education in Norway and Sweden provides a range of community based education structures which offers the ordinary citizen a means of better comprehending his own position in society. It provides him with greater knowledge of the social and economic context within which he operates and thereby helps him to have a fuller understanding of the problems facing his society.

EVALUATION

It is impossible to evaluate objectively the five different education systems. Many policy analysts might be inclined to begin such a topic by comparing educational expenditure levels. This sort of information, as we will see, is only of limited value in explaining the quality of a system. The table below lists education expenditure as a percentage of GDP in the five OECD countries studied.

Table 10.1: Total expenditure on education as a percentage of GDP

	Public sources	Private sources	Total
Austria	5.91	-	-
Japan	4.98	1.41	6.38
Norway	6.82	0.17	6.99
Sweden	7.19	-	-
Switzerland	5.01	0.10	5.11
Other OECD countries			
Greece	2.7	0.21	2.91
France	5.57	1.03	6.59
Ireland	5.84	0.28	6.12
Italy	4.96	-	-
U.K	4.97		

Source: OECD (1990,f,115)

As we can see Japan's public sector provides the lowest level of public educational expenditure of the five. When we include, however, private sources, it exceeds the Swiss and Austrian levels. The other five OECD countries listed all suffer from relatively high unemployment. Yet Japanese public expenditure levels are only slightly ahead of Italy and the UK and are below France and Ireland. Thus the expenditure levels on education shown in table 10.1 do not always correlate with unemployment levels. Also, in the Japanese case we see below that levels of expenditure do not always correlate with the quality of a system.

In spite of the relatively unexceptional level of public expenditure on education in Japan, and the often cramped or poorly fitted out schools, Japanese children still do extremely well on cross country comparisons in such subjects as maths and science. In addition there is a relatively low level of disparity of achievement among pupils. This strong education performance is not a recent phenomena since Japan has had almost universal literacy going back to the turn of the century. However, the excellence of her system today has doubtlessly been sharpened by her experience of the war and the competitive spirit which permeates her society. These general factors are strengthened by the conducive matrix of strong family support, particularly from the mother, the quality and dedication of teachers, and the labour force enticements of a good level education. In the latter context employers stay relatively aloof from the detailed operation of the education sector and appear happy to accept the sector's own grading of its final product.

However, in the overall context, the low unemployment group's public education expenditures are on average 11 per cent more than the higher unemployment group. Another common consideration when doing a comparative analysis is to look at enrolment levels.

Table 10.2 Enrolment rates of 17 year olds

	Percentages
Austria	82.8
Japan	90.5
Norway	76.2
Sweden	86.0
Switzerland	83.4
Other OECD Countries	
Greece	55.2
France	79.7
Ireland	64.7
Italy	46.3
U K	49.4

Source: OECD (1990,f,73).

The low unemployment group has on average a 30 per cent higher enrolment level than the other OECD countries. Also Austria's figure is six years older than the rest and one might expect things to have changed slightly since then. The low-high unemployment differential is more significant with the enrolment date than with the expenditure rate in Table 10.1 where the average differential was much less.

An interesting finding of the study is the large variety of educational structures even among such a relatively uniform group as regards level of economic development and unemployment. There appears therefore to be no one educational structure to which we can say other less developed or higher unemployment countries should aspire to. A country's education system can be seen in one way as a moulded part of that country's overall society and experience and the more effective education systems are those which evolve to suit the particular needs of each particular set of societal circumstances. However, all five educational systems, despite their structural variety, appear to have some common factors.

First, education is taken seriously in each of the five countries and the learning process is highly regarded by society. Second, the

qualifications and results attached to this process are usually held in high regard by both employers and society at large. Third, the education provided in each country appears, on average to be of a high calibre. There are of course elements which are relatively weaker, others are of a high quality and some are internationally renowned.

Regarding this last point all five have a number of outstanding features. First, there is the relative excellence of Japan's primary and secondary schools. Then there is Norway's high quality secondary vocational sector, her developing apprenticeship and her well regarded NUS. Her adult education is unmatched in its scope and she shares with Sweden a widely held attachment to this type of learning. Sweden's efforts to educate all ages and classes is remarkably thorough as is her resolve to encourage equally both the vocational and academic streams. The Swiss diversity of schooling is paralleled by each canton's determination to provide the very best for its children from available resources, an objective which seems to be part of cantonal identity almost. Both Austrian and Swiss dual systems are renowned, if for no other reason than their ability to incorporate a strata of youth who might easily fall through the educational net in other circumstances. The Austrian secondary vocational is highly regarded and has been strong enough, up till now at least, to compensate for a relatively weaker tertiary equivalent.

WORKFORCE TRAINING

Skills training in Norway is the largest component of active labour market management and its relative significance has increased in recent years. A unique aspect of Norway's workforce training, however, is the strong link it has with education through the comprehensive approach of its adult education sector. For example, the advanced vocational training courses for those over 19 years, and others with difficulties in the labour market are organised jointly. The educational authorities look after the curriculum and the workforce authorities identify the courses needed. Another important Norwegian development is the training ring/office structures. This facilitates inter-firm sharing of trainees and would be worth considering by economies with large SME sectors.

The link between the training and education sectors in Sweden has weakened over time in certain areas and strengthened in others. Regarding the former, the 1986 workforce training legislation considerably reduces the education sectors National Board of Education's role in labour market training. In contrast, the 1985 and 1986 developments in commissioned education has provided an opportunity for increasing the use of the school sector by private companies. The latter area has shown some growth, especially in the private sector purchases from university and colleges.

Swedish workforce training strongly focuses on the unemployed and the potentially unemployed and all trainees are recruited through the employment offices. AMI also plays a useful supporting role here for those who have difficulties choosing the right training course. At the level of the training centre, the experience of Ronneby's marketing manager and its use of its track record in providing management training could provide some ideas for any country's training centres who wish to increase their training sales to the private sector. However, both of these factors would be inadequate without first having a suitable pool of training instructors and some realisation by industry of the competitive importance of training ordinary staff. Japan's workforce training structures are organised in a relatively disaggregated way by contrast with Sweden and Norway. While the less numerous Vocational Training Colleges and Skill Development Centres are set up by the labour ministry's EPC, the more numerous VTSs are set up and run by various local authorities despite being tied in with the ministry's Human Resources Development Bureau. Another point of contrast has been the trend in Japanese state training, as far back as 1958, to move away from training the unemployed and providing for stock and moving towards the promotion and support of firm's own training efforts. In Japan today, the great bulk of training occurs within firms or in relation to them and state training efforts are mainly supportive of these activities or only mildly additional. The industry support bias of the state training sector stems partly at least from the belief, as stated in the 1985 Act, that the development of a worker's skill is necessary to secure his employment and that firms must become learning companies. Although some other countries are now regearing their state training sectors towards in-firm training, the relative uniqueness of Japan is that this process has been going on since the 1950s.

In regard to state support for private sector training a number of items stand out. First, the testing system. In existence since 1959, this provides a reasonably modest number of official and approved tests and has encouraged indirectly the growth of a sizeable number of other company based testing schemes. These tests provide efficiency goals which many ordinary workers are encouraged by their firms to aim for, and which many more aspire to regardless of such encouragement. Firms can also use these tests to improve efficiency by requiring that contract work be done only by those who have passed such tests. Second, the Vocational Ability Development Associations, as well as being involved in state tests, encourage firms to improve their skills through information, guidance and providing some resources. Third, the state's assistance to training in small and medium sized firms is considered exceptional by international standards.The Japanese appear to have made a reasonably wise decision here in that significant training support for large firms is considered less critical and the limited state resources for training are strongly weighted towards the weaker firm sector. Fourth, echoes of the education sector's centralised textbook method extend to the state training area in the labour ministry's stipulation that vocational training instructors must use the training material and tests which it approves, thereby enforcing some element of training uniformity throughout Japan.

Finally, we should reflect on O'Toole's work referred to in chapter 5. Those who are concerned to know the more effective national training structures should be aware that regional or implementation factors also need to be conducive. In this context the more successful regions in his study hold unemployment as the number one target and had developed an effective interknit among the relevant local bodies.

IN-FIRM TRAINING

There has been a steady growth in training related legislation in Sweden between the beginning of the 1970s and the early part of this decade. For firms in difficulty the state created training requirements and incentives as alternatives to redundancy. When the economy was under inflationary pressure, renewal funds were set up to transfer some of this pressure into training expenditure.

Whether such legislative enactments were always fully successful or not is not as important as the general intervention. Her collective agreements show evidence that she realised the significance of labour quality rather than solely the short term overweening emphasis on wage rates which is often too common elsewhere. Such concern may in the end only weaken real improvements in living standards.

In-company training has become a key growth area in Sweden surpassing all other adult learning areas. The restructuring of both the workforce and education sector's training activities, along with the relatively strong private sector belief in the competitive significance of labour skills, is expected to leave Sweden at the end of the century as a highly developed learning economy.

We spent some time looking at Japanese private sector training because of its relative uniqueness and its acknowledged success. Historically this system has its roots in such experiences as: the original privatised state factories, with their built-in training sectors geared to foreign technology transfer; the failure of its apprentice and technical schools to meet the needs of firms; some path breaking company training schools; and its war experience. Today, its private sector training is strongly interlinked with its wage, union and lifetime employment system and is built on the solid foundation of a high quality school or college graduate. The industrial union system encircles each firm and helps to provide workers with a strengthened view of their firm's own identity in the marketplace. The wage and lifetime employment system fosters greater staff retention and cultivates the passing on of skills to colleagues.

Training in western firms often operates apart from the usual flow of work with company or outside training specialists providing an expert service. In this system trainers are commonly identified as important but additional to more crucial activities such as production or marketing. In Japan, by contrast, the training function is more embedded in the firm's normal activity. Workers learn from colleagues and those in charge, from explanatory manuals prepared specifically for them by superiors, from self-development groups, and from their preparation for special tests related to their job. They also learn from the usual off-the-job company courses, in special training centres or elsewhere and from work related courses or private reading. Japanese workers may

learn relatively less from training specialists than their western counterparts. However they learn considerably more from the actual work flow itself and from reflection on the problems associated with it through OJT, group analysis or private reading. This system powerfully encourages the accumulation, discussion and sharing of work knowledge. Staff do not normally stockpile private bundles of skills to bargain with potential employers. Nor do large and medium sized firms normally inspect their job applicants for particular packages of expertise. They are more concerned about their capacity to learn, relearn and eventually develop others. Such firms tend more to hire generalists and operate organisational structures conducive to continuous learning.

Even smaller Japanese firms are less inclined than their western equivalents to hire particular skills and are strongly affected by the training ethos of larger firms. A large number of small firms benefit training-wise from group attachments based either on their district, parent trading group, zaibatsu or in their shared efforts to apply for state grants.

Expenditure by Japan on its company training system is not high by international standards. However, its workforce's total volume of learning is probably significant internationally if we also include its OJT, quality circles, etc. The basic job rotation system provides a range of work postings for operatives and a wider range for graduates thus facilitating multiskilling. This increases labour productivity, strengthens worker-firm attachment and reduces resistance to change. Other OECD countries which had previously used job rotation did so mainly to reduce staff boredom, alienation and the related costs.

Japan's formal and informal OJT, plus its individual and group learning system, is a major component of its overall efficiency. First, because it is so widespread. Second, because it develops learning throughout the ranks and thus improves staff right down to the basic operative. This subsidiarity in learning provides her with her deep rooted flexibility. In addition her integrated work approach of incorporating both usual and unusual operations into each worker's remit facilitates the continuous extension of skills and thereby the labour force's overall productivity. This contrasts with the alternative wherein the organisation divides work into routine packages and workers are not encouraged to widen their skills through continuous efforts to handle unusual operations.

To conclude this section we refer to Imai's idea of how an economy develops by considering his concept of the network society.[8] Traditionally, the two links which hold the economy together are: first, markets with their price signals from which participants are free to leave at will; and second organizations where participants are tied into long-term relationships within a power structure. Imai suggests that there is a growing interpenetration of markets and organizations. He argues that firms, while operating within markets, are becoming increasingly involved in long-term relationships while still remaining independent. This development is due to the declining significance of economies of scale caused mainly by the increased application of microelectronics to industrial production. The diminished impact of scale factors has resulted in fragmentation of the market into a wide range of specialised niches. These are best served by relatively small scale firms. Large firms will not fade away, however, even here there will be a growing sectionalization of activities related to product variety. The increasingly minute inter-firm and intra-firm division of labour will itself require improved links between different sections and firms in order to carry information from one area to another. Without, therefore, an effective network of links it will be impossible for the various parts of a system to react effectively to changes in other parts.

These new non-market links can relate to cooperation in such areas as research or training for example. Imai's work identifies the significance of an information network based on organizational premises rather than those more usually based on markets, ownership, interlocking shareholdings or directorates. He argues that it is the effective flow of information within the private sector from product design and planning to the point of sale which has made Japanese enterprises so responsive to market trends. Thus, in such a network economy, learning capacity and organizational interlinks are complementary parts of an effective whole.

The relevance of this concept is that proper information links between firms, which form part of a raw material to end product chain, provides a competitive edge over others which do not have such links. Part of this knowledge linkage can be provided through

training, proper briefing and such things as sharing research information. In the present context, our main interest would be the training and briefing links. These are quite well formed in Japanese society but sometimes much weaker elsewhere.

NOTES TO CHAPTER 10

1. The above comments are based on OECD (1992,a) the Basic Statistics section. Holland's unemployment more than halved between 1984, when it lay at 14 per cent and 1992, where it lay at just over 6 per cent. However for, 1993, it is still projected to lie in eleventh place just below the US.
2. See Santamarta (1991)p.23.
3. See OECD Observer, December 1992/January 1993 which indicates a drift in Sweden's 1993 unemployment projection to 5.2 per cent. Germany's 1993 projection at 4.8 per cent now, for the present at least. allows her to join the low unemployment club.
4. See Commission of the European Communities (1991)p.45. Apart from Ireland's and Spain's difficult unemployment position, which is well known, the 1993 OECD projections for Italy, Greece, France and the UK are 10.7 per cent, 10.5 per cent, 10.2 per cent, and 9.7 per cent, respectively.
5. Woien (1990) p.2 for example argued, that Norway's national authorities, when considering what to do on the long term unemployment problem, relied heavily on the lessons learned from other countries.
6. See Nestler (1983) p.9 and 23.
7. See Moro-Oka (1976)p.7. A 1990 Ministry of Education, Science and Culture publication outlined the locations of lifelong learning as homes, schools, and other institutions of formal education, citizens' public halls, public libraries, cultural centres, P.E. and sport centres, firms, vocational training centres, etc. see ICE,1990,c p.113.
8. See Morris-Suzuki (1989)p.188-191 which expands on what follows.

11 CONCLUSIONS and *Recommendations*

Various views on the role of education and learning exist. For example, some argue that education acts as a screening device for identifying the more talented in society. In this view, talent is considered to be an inherent trait in people. This approach views education as merely a passive indicator of a persons ability without any real capacity to develop that ability. Other specialists by contrast suggest that the bureaucratisation of economic life has led to a situation where job recruitment is based solely on educational achievement. This latter view is held in spite of the fact that academic performance, according to employers, is not related to job performance.[1] In contrast, neoclassical theory argues simply that education improves a person's productivity. This idea is consistent with the theory of human capital which states that education is an investment in a person's ability.

Our own approach to education and training is that they are both part of an overall continuum - education, to training, to labour productivity. While any individual's education, training and productivity experience may conflict or be at variance a society's normally will not. In general, a high quality low variation education sector, powerfully supports an effective post-education training system which in turn forms the basis of a learning economy providing high labour productivity. Other things being equal the lower the variability and the higher the quality of one's human resources the greater ones output and employment. Similarly, an improvement in labour quality improves the economy's employment efficiency and is a critical ingredient in its development. The more effective a society's learning structures and the more thoroughly each new population cohort's ability is

developed the more advanced the economy.

The title of this study 'Learning Societies and Low Unemployment' suggests that low unemployment may in some way be encouraged by a society which, in relative terms, excels at developing its human resources. However, one cannot prove that the education and training systems of the five countries were mainly or significantly responsible for their low unemployment. Yet their relative high quality and the impressive attention paid to them is the one common factor, along with their determination to keep unemployment low. No other significant factors are common to the five.

The two main conclusions of this study are:

- that all five countries, in relative terms, are learning societies;
- all five, up to recently at least, have acted with a strong determination to keep unemployment low.[2]

We now detail some recommendations which arise from our general conclusions.[3] The recommendations are related to the various parts of each chapter for convenience.

Recommendations

On the basis of the introductory data, the general reasons for low unemployment and the background material we make the following points. These are developed in recommendations one to four.

Low unemployment is not peculiar either to:

- a high or low population volume or density
- a high or low level of state involvement
- a high or low level of foreign trade
- a particular geographic location.

1. It is therefore suggested that high unemployment countries focus elsewhere in their search for solutions than on the simple issues of population growth, levels of state involvement or foreign trade and geographic location.

Commentary Those who simplistically argue that a larger or smaller population, state sector or level of foreign trade are necessary to reduce unemployment should reconsider their views

on the basis of the evidence.[4] Similarly, those who provide detailed arguments about the problems associated with peripherality in countries such as Ireland or Portugal being on the edge of Europe, must wonder what edge we are talking about when we consider Japan's weak economic state a century ago when it might have been classed as being on the edge of the world.[5] The only real geographical similarity with the five countries is that they all lie in the Northern hemisphere.

2. As a high unemployment country, we should develop a strong political and social determination to reduce unemployment. This determination should operate and be visible at all levels in society including national, regional, community and the firm, to ensure that the decisions and structures which are determined at each of these levels are suitably changed. In high unemployment countries such as Ireland, the government can play a key role by introducing changes, which it alone is best positioned to do, to help foster such a new consensus. For this reason, a full Jobs Forum should be introduced into Ireland at an early date, following a period of adequate preparation. This proposal has been dealt with elsewhere in some detail.[6]

Commentary: A societal consensus is not like a VAT or labour regulation. One cannot create it solely by legislation or government statement. Ireland exhibits, all the traits of what could be termed an unemployment society. Evidence of this is found in the following points.

- First, most people hold the view that the problem is a little like a death in the family, traumatic but for the most part in God's hands. For example, the public reaction to the dole figures passing the 300,000 was to say the least muted.
- Second, even as the dole figures have been increasing over time, our ability to concentrate on the issue has been weak. In Ireland the public and media's attention tends to be most focused on the issue around the first Friday of every month, when the Live Register figures are released. However, the focus on it outside this is rather limited except when other unemployment data are issued. In contrast the media and public attention has been significantly more focused on other important, though in the scale of things, probably much less fundamental factors where various alternatives, learned or popular analysis, lobby group opinion and political

commentary are given significant attention.

- Third, up until very recent times, unemployment in Ireland was mainly considered to be a side effect of a malfunctioning sector or economy. Therefore, learned and popular opinion tended often to structure their articles or commentary by referring only at the end, or peripherally, to the overall problem of unemployment. For example, they would deal with a new 'White Paper on Industry' or a 'New Tourism Plan' and then refer to the impact of these on unemployment levels. It is probably only since Spring 1991 that unemployment, in the media at least, has been somewhat more focused upon.[7]
- Fourth, the main lobby groups in Ireland have traditionally been relatively weak on the unemployment problem. A development in recent times, however, has been the strong showing of the Irish Congress of Trade Unions (ICTU) and one or two of its affiliates, in particular SIPTU. The employers' bodies and others have been much less focussed on the issue although the former appear to be showing some minor signs of life lately.[8] An important finding from O'Tooles work, which we referred to in Chapter 5, is that although we can have the same government supports in two different regions of a country, the one where all the structures and interest groups focus on the jobs problem is the more successful at dealing with the problem.

At government level a parliamentary committee on employment operated recently. This was not a Jobs Forum. The debate on the Jobs Forum preceding the government's decision to introduce this committee was for the most part insufficient to provide us with the information base for a proper Jobs Forum. Indeed, if the government had then decided to introduce the Forum, it may have found itself with an inadequate reservoir of advice on it and the whole process might have come unravelled. The recent "Programme for a Partnership Government (1993-1997)" includes a commitment to introduce a National Economic and Social Forum (NESF). As it stands at present the main drawback of this well intentioned structure is that it will focus on "major issues of economic and social policy". Quite frankly the unemployment problem is desperate enough, and more importantly, critical enough to absorb all the energies of such a structure. As a society without work, we should be unequivocal in our approach to the crisis. The NESF should avoid having a menagerie of issues to deal

with and instead concentrate on number one for the moment.

3. In discussions with our EC partners on developments affecting us at European level, we should aim to improve the effectiveness of our lobbying. Our purpose should be to maximise the impact of our membership not only on our output and living standards, but also to improve our level of employment.

Commentary: The main thrust of lobbying on EC developments has been in reducing the gap in living standards between us and the more developed members. At national and also lobby group level a greater awareness of increasing the employment impact of our EC membership must become evident. For this reason, all major Irish proposals, requests and lobby positions should be informed by a powerful concern for the employment content of submissions and advisors should, in the initial stages at least, be involved in tilting our present approach in the direction of such a change. We should recall in all of this that, since we joined the EC, our unemployment rate has approximately quadrupled in spite of the improvements in living standards.[9]

4. We should make more effective use of the experience of low unemployment countries and other countries which have succeeded in introducing new employment efficient programmes, schemes or projects.

Commentary: Because of our historical reliance on the UK and more recently our integration into Europe, our interest in learning from the experience of other countries has been rather limited. Many of our structures are understandably based on the British system and our consideration of the experience of other EC countries has been rather inadequate. Even our OECD membership is rather passive, with most of our public servants focusing mainly on ensuring that we are properly covered in any OECD report referring to the country. In addition, although OECD reports are avidly read by these same public servants, the level of national debate on ideas coming through the OECD from other countries is relatively limited. There are, however, some slight signs of change. For example, the recent NESC study (no. 39) which looks at aspects of lower unemployment countries is a useful development.

As a consequence of the material on education we make the

following recommendations.

5. A high quality education sector, with a low variation in student ability, makes an important contribution to the economy and is of more significance than the particular type of education system. As a corollary, there is no a priori reason why the education sector should become more vocational in a period of high unemployment.

Commentary: Ireland is complacent with the quality of its education. We will make two points which arise from reflecting upon the experience of low unemployment countries.

First, from experience of dealing with secondary graduates entering the tertiary sector, one can see a certain weakness in mathematics. The average ability of such students to do simple calculations without the aid of a calculator is limited. Similarly, the level of variation in maths ability is higher than it should be. If this is so with secondary graduates who enter tertiary education, one wonders about those who directly enter the labour force. An indication of how things stand here is given in the introduction to the 1992 Green Paper on Education. This admits that a significant minority of children encounter basic numeracy and literacy problems. By contrast, the Japanese secondary graduate has a high computational capacity with a low ability variation and this provides an essential base to further education and more importantly to firm-related learning.

Second, there is a higher variation in the quality of lower and higher secondary school graduates than should be the case. For instance, the 1992 Green Paper states that more than 20 per cent of pupils quit upper secondary without getting 5 D grades. There is also a higher than necessary level of wastage due to school drop outs and repeating. Part of the background to this situation is probably the continual, though in recent times somewhat weakened, impact on education of the Darwinian ethos, along with the commonly accepted belief that people are made with different abilities. This is not meant to deny that ability differences exist. They do of course, but our education system might be better if it concentrated more on improving the weaker to reduce both the level of variation and student drop-outs. Again, the Japanese education system's ability to reduce significantly educational

differentials, at least in the earlier stages of education, forms a powerful base to adult learning capacities.

As regards the choice of either vocational or academic, Switzerland and Austria have strong apprentice sectors and Norway and Sweden have well developed vocational school systems. However, although this puts Japan in the minority with its highly academic system, it still does not provide the evidence necessary to support, without some consideration, a move to de-emphasise the general education sector and strengthen the vocational one. Culliton's argument to this effect appears to arise from the need to increase the education sector's ability to provide a greater proportion of combat ready graduates.[10] However, if this results in an increase in the numbers with specific vocational skills we must concern ourselves with the trend worldwide towards flexible skills to facilitate the development of flexible organisations.

If the idea means instead that we produce a broadly trained vocational pupil, then the more essential consideration relates to the quality and variation of ability, rather than anything else. If Irish firms begin to adopt a more Japanese style embedded training system - and this appears to be a major factor in Japanese competitiveness - then a high quality generalist recruit seems just as worthwhile at least for the medium and larger sized firms. Culliton's blanket statement that a high academic performance in an education system provides a poor platform for subsequent vocational or industrial training, misses this key point and gives inadequate recognition to the question of quality. Brandt's study of employee training provides some queries for those who formulate their analysis on the basis of the simplistic vocational academic divide. She argues, on the basis of research into a variety of Norwegian firms, that it is a mistake to think that only specialised subjects, giving what she calls operative competence, are vocational. She found from her interviews that much of continuing education in firms was aimed at giving basic competence in native language, foreign languages and not least in interpersonal skills.[11]

Culliton's other point, that we need to strengthen the vocational sector so that it commands widespread respect and support, cannot be argued with as long as we add on the quality and low variation points. First, because some pupils may prefer such a strengthened vocational sector. Second, because of the present inadequacies of our in-firm training systems, especially the smaller ones which form

a large component of our economy.

The general weakness of Culliton's important and timely report is its failure to identify learning capacity in a company as one of its key competitive components. It is therefore understandable for the report to suggest that the education sector should create more high quality vocational pupils after which the education sector can feel it has done its job. However, our own analysis identifies the key competitive component as being the creation of learning companies which are able to improve continually the productivity of their workforce and management. Culliton does not deal with this increasingly important component and therein lies the critical weakness in its advice on how industrial expenditure should be regarded.

6. We need to give the learning process and the education and qualification system greater status.

Commentary: This may come as a surprise to some readers. However, from the evidence available on the five countries, Irish society by contrast places an inadequate focus on learning and education. When education is being debated, items such as third level places and the role of the religious in schools have tended to dwarf such things as the apprenticeship system, the university/NUS split, adult education, the variation in student results and so on. There is of course debate on some of these topics but not at all to the same pitch and pattern as in our five OECD countries. Even the debate following the Green Paper on Education has been relatively mild in comparison with that generated by other topics.

In addition, our educators do not hold the same status in the community as, for example, those in Japan or Austria. Teaching is not quite the prestigious occupation it once was. Its relative status, which is not necessarily the same thing as income, has shrunk over time as other occupations have arrived and grown. Educators in a well developed economy should bear considerable responsibility and benefit from a corresponding status. Being acutely aware of the political demands such a point could place on the industrial relations aspect of education, it should be pointed out that such changes should take place over a period of years and would benefit from a consideration of the general principles related to the educators' pay and productivity system in Japan. Status is

something one cannot negotiate for but should come with time as things are improved and as society becomes more aware of the importance of education.

7. We need a community based equivalent of the study circle or popular movement involvement in education. Consideration should be given to focussing on how such structures might provide a mechanism for improved community based learning.

Commentary: The volume and variety of community based learning in Ireland is rather limited and indicates a gap in adult learning which needs to be filled in some way or other.

As a result of the material on post-education learning and training we make recommendations eight to fourteen.

8. We should consider the advantages of taking a comprehensive approach to adult education and training in order to rationalise and improve the various segments of post-education learning.

One of the advantages of such a development would be to reduce areas of unnecessary overlap within the education sector and between it and the training sector. Such a move would require a significant amount of planning which would itself pinpoint further areas for improvement. In addition, it might lead to the better use of the education sector's capital stock which suffers from marked seasonal usage patterns.

The stock of underutilised school and college space which exists at certain times of the year, in the evenings and at weekends, could be put to use for adult learning purposes. Also, school buildings closed for demographic reasons could similarly be used. An OECD report on surplus school space refers to how Swedish schools remain open for community and recreation uses after school hours.[12] Following some unpopular decisions with demographic related school closures such buildings in Sweden are now kept as long as possible in educational use and the local community are involved in the decision making process following closure.

9. We should consider the introduction of commissioned education facilities at secondary and tertiary level.

Commentary: This could improve the links between education and work, increase cost-effectively the learning resources available

in society, and improve the education sector's range of expertise. The Swedish experience of commissioned education would be an important starting point in studying this option.

10. Unemployment payments should be taken out of the Department of Social Welfare and placed in a suitably developed section of the Department of Enterprise and Employment.

Commentary: At present the former spends considerable state funds on dole payments while the latter tries to hold the line on most of the active policies in the jobs area. There are two reasons for this proposal.

- First, there is a degree of overlap between the activities of both departments and an inadequate level of liaison in some areas. As the Live Register has increased the Department of Social Welfare has been putting more effort into considering new schemes to encourage people to take suitable alternatives to staying passively on the dole queues. It might be better all round if one department dealt with both the active and passive schemes for the unemployed and held as part of their brief the requirement that emphasis be placed on the active element so as to reduce, as far as possible, the dole dependency syndrome which can develop from long periods of unemployment.

- Second, dole payments were originally introduced as a temporary support while the unemployed person found a new job. However, keeping these payments within the income maintenance department of government has considerably weakened this perspective and strengthened enormously the alternative.

No single department formally holds responsibility for unemployment. It is a general government responsibility. In this context it may be worth remodelling slightly the Department of Enterprise and Employment and giving it the overall responsibility of reducing unemployment. This would of course involve it with related departments such as agriculture, tourism, transport, education and finance. How this would operate is something which would need careful consideration, including possibly a look at the experience of Austria.

Roche and Tansey provide a range of interesting options in regard to workforce training structures in Ireland.[13] Option 2 advises that economic or industry-related training be retained in FAS and non-economic schemes be transferred to the Department of Social Welfare. The logic of our earlier points, and the practice in Sweden and Norway, argues strongly against any such transfer. Such a move would reduce even further the possibility of a smoother institutional link between the unemployed, their schemes, and the 'real' world of work which is more easily facilitated under a Department of Enterprise and Employment with a total unemployment remit. This idea might instead create a ghettoization effect for such schemes by placing them under the dependency sector of government.

11. To improve our competitiveness the state, while taking account of fiscal constraints, should encourage firms to increase their training by introducing such structures as:

(a) Training ring/offices or other group training supports for the SME firm sector. Such structures could be based on geographical, industrial, skill or other premises. Norwegian and Japanese experience would be useful to reflect on as part of the consideration of this proposal.

(b) An effective national skill testing system which could include a major skills competition each year. This competition should be developed so as to capture the same level of interest at least as the Aer Lingus Young Scientist of the Year Exhibition. The tests themselves should not be limited to the traditional apprentice trades but should include some of the more modern skills. As part of the early planning for such an idea, Japan's testing system and the apprentice trades classification in Austria and Switzerland could be reviewed.[14]

(c) Japan's Vocational Ability Development Association seems to play a useful role in promoting company training. In view of the difficulties we have in encouraging company training, this body is worth studying as part of the search to find more effective ways to encourage company training.

Commentary on 11(c): If a new body is set up it might be worth

including, as part of its remit, the activities in (a) and (b) above. An important consideration is to avoid duplication or lack of clarity. In this context, it might instead be possible to reorganise some of the present structures. This alternative option, however, must result in a thorough reworking and realignment of these structures so as to produce a more effective impact on company training than exists at present.

12. Trade unions, at firm level, should look at the advantages of becoming more involved in offering useful proposals on how staff training can be improved, particularly when a lack of it weakens the firms viability and job capacity.

13. In view of the central role which labour skills play in the competitiveness of an economy, the state should introduce new training and organisational incentives to strengthen the viability of firms and their job creation capacity. Since additional funds are needed here and because of the serious exchequer situation, the main financing of this might come from a reallocation of state resources with special attention given to the IDA, SFADCO and Udaras vote.

Commentary on 13: Irish industrial policy is still strongly influenced by the economic idea that investment is a critical determinant of industrial development. This basic concept, for example, has provided and still provides a significant part of the IDAs conceptual underlay.

To take the food industry as a case in point, PA Consulting Group categorised the main forms of direct state assistance into capital, marketing, R & D and workforce support. Having looked at the expenditure levels, they concluded that most direct state resources are still provided in terms of capital assistance, with marketing and R & D totalling only 20 per cent of overall expenditure.[15]

The key activity today in competitive terms is organizational, and the essential ingredient here is the quality of labour and management. We can purchase raw materials and equipment from wherever it is available, but the ability to add value competitively to these inputs is critically reliant on the organizational efficiency of our firms and the quality of our employees. The IDA and the other

state industrial agencies have been relatively ineffective at impacting on these particular factors.

We are not suggesting that the IDA, SFADCO and Udaras be wound up and replaced by a different structure. The IDA and its sister agencies have done trojan work in the cause of development. However, now the game has changed and the industrial development strategy, its targets and incentive structures, should be thoroughly reviewed and steadily tilted towards the new competitive reality.[16] If this is not possible, new structures should be slowly developed to tackle the new situation.

In the Danish and Dutch food industry, grants for capital equipment are not widely available, and the Dutch Department of Agriculture plays a major role in funding education for agriculture and the food processing sector. In Sweden, an important element of industrial support is R & D and the bulk of technical development resources is given, not to firms, but to the tertiary education sector and collective research institutes.[17]

Regarding the type of state training and organizational efficiency incentives we should introduce, the planning of these would benefit from a review of the Norwegian, Swedish and Japanese ones. These incentives should be supportive of such factors as OJT, in-firm development groups, company training manuals and so on. In addition more competitive work structures should be encouraged with a proper consideration of what was termed the integrated work system approach.

14. The private sector and in particular larger Irish firms should vigorously reassess the importance of organizational factors which improve employee work skills and productivity and thereby organizational efficiency.

Commentary: In learning companies the quality of staff is a key competitive factor. At every level, the knowledge and skill of staff must be continually renewed and reinvigorated through OJT, Off-JT, group learning schemes, etc.

The key strategic factor in competitiveness above all others is the quality of staff at every level, its flexibility and capacity to respond to new circumstances; its ability to handle complex situations; its competence in improving and renewing the level of skills within the firm; and its enthusiasm for learning new and better ways. Once the larger firms begin to introduce more efficient learning

structures the SME sector will also be affected by the new approach.

This recommendation is in many ways the most important one. It will not happen by the publication of this report however. A key role of a Jobs Forum would be to have this and other ideas discussed and debated at firm, association and industry level, following the Forum's airing of such ideas at national level through inviting relevant company personnel from some of the low unemployment countries. Government dictat or cabinet prayers will not change the mindset approach of the overreached and stress laden executive, trade union official, teacher, administrator and others. This will only happen slowly. A major role of a national Jobs Forum would be to relay the arguments and advantages of new approaches throughout the nation so as to quicken dramatically the necessary changes which cannot be legislated into existence, or adequately encouraged by incentives alone. The main role of an effective Jobs Forum will be to enlighten and inform, and by so doing to act as a catalyst for change. What do we do in this area while we await the arrival of a Jobs Forum. Are there things we can get on with?

Recommendation 14 touches on a most crucial weakness in our ability to expand employment, ie the competitive weakness of our private sector and in particular the indigenous element. In this context the "Programme for a Partnership Government (1993-1997)" contains a useful proposal for a jobs and competitiveness project which deals with this aspect of the problem. The main focus of this project is to help transfer best company practices from firms in low unemployment countries. This will operate in a number of ways. First, the company specialists, academics and others will be taken over from these countries to explain to their Irish equivalents the various company organisational practices. Second, this will be followed by key company staff in suitable sectors speaking to their equivalents in Irish companies and explaining some of the ingredients of their companies success. This second stage will involve a thorough process of briefing in a hands on way, on how best practices actually work on the ground.

These first two stages will operate mainly through the medium of seminars, workshops and the like. Following the briefing of a wide number of Irish company staff the best practices will then be reviewed by the project team and its network of support throughout the private sector. The project team and its support

structures will then come to an informal decision on what better type of organisational practices could be introduced into the Irish private sector. Following this a number of multi-discipline task forces at sectoral level will be set up to encourage and help companies introduce more effective organisational practices. The emphasis for the implementation task force stage will be to support firms in their efforts to become more efficient and competitive and also to become better employers.

A BETTER FUTURE

These recommendations arise from our two major conclusions. Whether these proposals or similar ones are introduced or not will only be known in time. For those who tend to greet new ideas with obstacles or silence we can only quote Drucker in response.[18] He says that in certain countries the main players are normally preoccupied with their own needs and concerns and as a rule are rarely prepared to act in the common interest. When new solutions are proposed, some see them as a threat and oppose them, others drag their feet, while others may feel vindicated in their position. In Japan, by contrast, Drucker argues that while new proposals often run into opposition within certain groups, the special concerns of these groups are held in abeyance until the national interest has been thought through. By contrast in other countries the concerns of special interest groups become the central focus of policy debate, while in Japan such concerns are peripheral.

The Irish unemployment crisis is an indication of a very weakened society. This crisis is explained by the way we organise and run our firms, factories and unions, our schools and colleges, our local communities, civil service and state companies, our parliament, media and religious bodies. However, the size of the problem creates a fertile soil for new patterns and changed ways. When the pessimists and detractors react with silence, disapproval or opposition to new proposals their concerns must be answered, or in the end sidestepped. No proposal is flawless, no change ideal and no society can be made perfect. However, for a society with such a massive unemployment problem, our slow artless tinkering with things is the worst of all worlds.

Notes to Chapter 11

1. See Sanyal (1987) .
2. The five countries have weaknesses in their systems, many of which have been referred to in the text. To identify them as learning societies is therefore slightly exaggerated. However, the identification is useful for a number of reasons. First, parts of the learning elements of the five are interesting, worth studying and exceptional in international terms. Second, in comparison with many other countries' systems the total of the five are probably very effective overall. Third, the concept of learning societies is used in a descriptive way to explain a society which is, and endeavours to be, effective in learning in today's context. At a later date, it may be worthwhile formulating a full model of what a learning society is and how it should evolve.
3. These recommendations are general proposals generated by a consideration of the complex tapestry of the five systems. One of the main advantages of looking at the experience of other countries is that it places the structures and methods of one's own country into relief. In this sense, it is probably more useful than an analysis of one's institutions based solely on theory. It is also probably more beneficial than a review of one's history which although useful relates to different stages of technological development. This is not to imply that history and theory are not of use. They are indeed. However, our analysis of our problems have tended to be overly based on consideration of theoretical and historical paradigms and have neglected a fuller consideration of other countries' experience. Where other countries have been considered they have tended to be close neighbours or those with which we have had long associations. (See Recommendation below).
4. The conventional wisdom among certain people in Ireland is that our high population growth is in some ways partly responsible for our unemployment problem. Although we do not refer to population growth in this volume we do see that a low or high population per se does not correlate with low or high unemployment. Walsh in Kerins (1988)p.33-35. points to some of the advantages of a high population and argues that blaming the rate of labour force growth for the high level of Irish unemployment diverts attention from more important reasons. As regards foreign trade the point is not meant to imply that extra exports or at least a balanced foreign trade account is not desirable. Rather that putting large reserves into increasing exports may not, per se, make any real dent on the unemployment problem unless other factors are also present.

5. Peripherality does impose certain costs on countries such as Ireland. These include access costs, including the cost related to transporting goods, personnel, keeping in touch with the market and additional storage costs. The drift of Cuddy's and Keane's interesting article is that the drawbacks associated with Ireland's peripherality should encourage us to look at other advantages such as competitive factors and unit costs to encourage the development of low wage peripheral firms (1990)p.381-405. Under the Single European Market process they argue that the increased scope for market forces will require competitive response from peripheral areas. The difficulty with this approach is that it is based on a static analysis which is fine as far as it goes but must be identified for what it is. After all, peripherality could just as easily be noted in the case of Finland, Norway, Sweden or Japan. The real question is how does a periphery become a core? Surely by doing it differently than the simplistic gap maintaining approach of a low wage cost regime. The issue should be how we become a high value added economy with a strong indigenous sector and this is a question of long term economic development rather than short term wage variation. We will indeed need to remain wage and cost competitive but we also need to regear our economy to this high value added approach. We cannot always compete in the economies of scale stakes but new technology is returning some of the advantages to small scale industry. In addition, Swedish experience indicates that creating multinationals is possible even in small economies adjacent to the Arctic Circle.
6. Kerins originated this idea and first detailed it in 1986. See Kerins (1987 and 1991) Sunday Business Post, 1st March 1992, The Irish Times, 23 June 1993 and the Irish Independent, 24 June 1993.
7. More important however, was probably the introduction of the Jobs Forum idea to the political debate around that time. The introduction of this idea provided many people with a window of hope and certain newspapers began to carve out the unemployment topic in a more focussed way, rather than as a tagged on element of other stories or as a result of new unemployment data on which there would be the normal anodyne political and societal commentary.
8. See for example ICTU's support for the Jobs Forum idea, the continuous statements by its General Secretary and others on the jobs issue and most recently its 1993 pre-budget submission, titled "A Budget for jobs and Fairness". Although IBEC at council level have been relatively quiet on the unemployment issue, at sub-council level they have been supporters of the Jobs and Competitiveness Project referred to in recommendation 14.
9. There is a general weakness on unemployment within the EC. Since 1973 EC unemployment has approximately quadrupled. Two difficulties are evident here. First, at both Community and national level there appears to be an inadequate determination to reduce unemployment. Second, Commission, Council of Ministers and Heads of Government meetings are noticeably weak in requesting or analysing solutions to unemployment.
10. See Culliton (1992) chapter 6.

11. See OECD (1991,c) p.45. 'Operative standard competence' she defines as that which is learned in basic vocational or professional education and is practical, technical or specific for certain tasks. However, the competence is so general that it may be used in different firms.
12. See OECD (1985).
13. See Roche and Tansey (1992)p.145-149.
14. Account should also be taken of the trade configurations in larger and medium sized firms as we saw from our note on Lenzing AG. Here traditional trade categories had been considerably reduced to be replaced by new trades. The trade testing system should therefore be capable of adapting to new skill areas as technology develops.
15. Based on data extracted from Tables 5.2, 5.11 and 5.12 in PA Consulting Group (1992). It is important to note that this study did not review the data on workforce support.
16. Very recently material has began to appear in the literature on the link between competitiveness and labour quality in the Irish context. See the interesting article by Hitchens and Bernie (1992) which I came across after writing the above.
17. See PA Consulting Group (1992) p. 67-70.
18. See options 4 and 5 in Roche and Tansey (1992)p.146-147.
19. See Drucker (1981).

APPENDICES

Appendix 1:

Norwegian Upper Secondary - Main Subjects.

GENERAL AREA

This takes the place of the old grammar school set up. Here the emphasis is placed on theoretical subjects including Norwegian, maths, science, history and so on. There is one foundation common to all pupils. Up until the 1990-91 year the advanced course grouped pupils into four different branches - social studies, modern languages, natural science and music theory. But since then the branch division has been abolished and a new structure has been introduced to provide greater flexibility of choice across the old branch categories. The general area exam at the end leads to a certificate recognised for matriculation purposes.

TECHNICAL & INDUSTRIAL AREA

This provides the practical and theoretical training for many different occupations within the services and manufacturing sectors and it provides the largest number of courses in the upper secondary sector. Since the training received in this area is directed to specific jobs specialization begins at the foundation level. It contains 60 - 70 different foundation courses - the most popular being in such areas as electrical, mechanical and engineering, hairdressing, sewing, carpentry, building, sheet-metal, welding and steel construction, and graphic arts.In addition there are around 80-90 different advanced courses, level I, and the options here are limited by the foundation course which the student has already picked. At the advanced course II level there are around 50 courses but few take this option since most young people at this level have began an apprenticeship.

COMMERCIAL AND CLERICAL

This provides a three- year training in administrative subjects and each year forms a complete examinable unit. The foundation

course is the same for all and the advanced course I has two branches - economics and office and administration. Advanced course II has five branches - marketing, bookkeeping, computing and information technology, the travel industry and foreign languages and office administration. The final exam also allows matriculation.

SOCIAL SERVICES AND HEALTH

This provides young people with training in the social welfare and health area. There is one common foundation course and on completion of two years here the pupil does one year only of the advanced course I which qualifies for employment. The topics in the advanced course covers seven branches - child care, nursing auxiliary, medical secretary, dental assistant, pedicure, skin care and pharmaceutical technician. Pupils completing satisfactorily the above three years reach matriculation standard.

HOME ECONOMICS

This provides a basic training for the restaurant and home institutional care area. There are four foundation courses - cookery, waiting, home economics and combination of these three. There are five advanced courses I - cookery, institutional cookery, waiting, the environment and its upkeep and care. The combined foundation leaves you with the option of all of the above advanced course options while the other three restrict your choice. Cookery and waiting operate under the apprenticeship system and pupils here can take their craft exams to get the relevant craft certificate. Apart from this there is a third year general studies course which follows on from the two-year foundation course in cookery, waiting and home economics or from the home economics course. This combines core subjects with home economics and emphasises special diets.

DOMESTIC HANDICRAFTS AND AESTHETIC

This provides young people with a basic training in crafts and music. The area has two branches - the domestic handicrafts and the music branch. In the former a full year foundation covers art

with emphasis on design, colour and drawing. In addition five half-year foundation courses are available. An advanced course I covers sewing, weaving, wood carvings, design and colour metalwork interior design and customer guidance. The advanced courses II exist for textile assistant, weaver, club assistant, crafts worker/instructor and activity leader.

In contrast the music branch provides only one two-year foundation course and a final year of general subjects and music. After these three years a pupil can matriculate.

PHYSICAL EDUCATION

This option does not lead to a recognised job qualification but the foundation course is provided with some recognition by the country's Sports and Athletics Association.

The majority of schools run a two-year foundation course combining physical education and general studies but there is also a one year option. After the former the pupil can then take a general studies course combining physical eduction with general subjects and thereby be able to matriculate.

MARITIME

This prepares young people for work on boats and off-shore. There are four branches which leads to certificates in the following occupations: marine engineering grade II, radiotelegraphy, electro automation and mate. This is structured over three years and contains foundation, advanced I and advanced II. The student when finished the three years can take a specialist half year to achieve a master's or marine technician certificate. Alternatively a one year extra course can lead to a catering officer certificate.

FISHING

This prepares young people for the fishing industry. There are three different branches covering the following type of occupations: fishermen, production of fish and crustaceans and other work in fishing including that related to food production. Each branch takes three years with a foundation and advanced courses I and II.

It is worth mentioning here that a large number of two-year vocational foundation courses exist and, on completing these, students can proceed as normal to the next stage of that vocational stream. Alternatively they can switch into the second year of the general study area or they can opt for a general studies year to achieve matriculation. For example, as we saw above, a number of two-year foundation courses operate in the technical, industrial and physical education areas and thereby provide this switch to the general study option.

Appendix 2:

Austria's BmS Schools

Middle level vocational schools	Normal duration in years
Industrial	3 - 4
Trade	3 - 4 (rarely 5)
Craft	3 - 4
Commercial	1 - 3
Domestic science	1 - 3
Tourism & catering	3 (sometimes 2)
Social work	3 (sometimes 2)
Agricultural	1 - 3 (sometimes 4)
Nursing	1 or 4

All the above schools except nursing and social work start while a pupil is only 14 and therefore their first year is part of compulsory school. Nursing does not begin until the pupil reaches at least 16 and up to 18 for psychiatric nursing. In addition 17 is the minimum age for entry to social work schools. The social work schools are of the special type - ie. for adults. This is because they prepare pupils for working with social problems and pupils would not be adequately mature at 14 to take up such a course. Completion of these schools may or may not involve a formal examination at the end of the course.

Appendix 3:

Vocational training in Switzerland

About 40,000 persons receive a training comparable to the 1978 Act but under different legislation. The main professions are the following:

- Agriculture - training here is covered by the vocational training law on agriculture and deals with such professions as farmer, horse-trainer, etc. Forests - are covered by a special law on forestry and relates to forester.
- Health - paramedical careers are dealt with a cantonal level. However, the training of nurses, laboratory assistants, radiographers and dieticians have been delegated to the Swiss Red Cross which provides courses for about 10,000 people equal to over four per cent of all those in vocational education. In addition, somewhat less than half this amount are trained for non-medical health professions in courses run by the cantons or delegated to third parties such as doctors or dentists organisations.
- Training in the post office, the railways and other such large corporations.

Appendix 4:

Full time vocational schools - Switzerland

- Trade and Industrial - these offer courses equivalent to the dual system apprenticeship in such areas as textiles, metal trades, etc. and lead to a federal certificate. They generally provide a broader training than the dual training so that their graduates are in a better position to move on to more advanced positions.

- Commercial - these provide a three-year programme leading to a diploma or a four year programme leading to cantonal maturite and both types of courses can be offered in the same schools. The diploma is equivalent to the apprenticeship and the courses are considered part of vocational education. However, the maturite programmes are considered part of the general education sector and lead on to higher education.

- Transportation and communication - these often share a common organisation with a commercial school and offer a two-year programme leading to a diploma specifically designed for careers in the area.

- Design - these schools normally provide a three-year diploma course from which graduates may enter numerous occupations in industry or continue on in further education.

- Agriculture and home economics - the farming schools are administered by the federal authorities whereas the home economics schools are offered by cantonal and municipal schools.

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Note: subjects are indexed in greater detail under the individual countries studied i.e. Austria, Japan, Norway, Sweden, Switzerland.

Anto Kerins is an economist with the Dublin Institute of Technology. He has devoted much time to the problem of unemployment and its solution. In 1986, he was the first to propose and detail the concept of a Jobs Forum and this led to considerable debate on the topic. He has written widely on the subject of unemployment and edited "Unemployment the Need for Change" (1988). In 1992, he proposed and developed the "Jobs and Competitiveness Project" which is in the "Programme for a Partnership Government 1993 – 1997". Until recently, he was a Director of the Bolton Trust.

IRELAND is a world leader in literature, music and v
bred horses. She has also done well in economic grow
foreign trade and low inflation. However, in
unemployment she is also, unfortunately, a world lead
This book approaches the jobs crisis in Ireland by
reflecting on the experience of five relatively low
unemployment nations: Austria, Japan, Norway, Swec
and Switzerland. The book offers a wide range of ide
and proposals on how to reduce our unemployment.
also makes several important points.

First, in describing Ireland as an unemployment socie
points to the widespread belief that the problem is
unsolvable. *This belief is shared at all levels of society and to a type of communal resignation.* It is difficult to identif
the existence of any substantial group of people who
believe Irish unemployment can be solved.

Second, the evidence from the low unemployment
countries indicates that this communal resignation is p
of the problem. These countries have all had their ow
difficulties with unemployment. However, in all cases
such difficulties have led to a nation-wide consensus t
reduce unemployment. Although the solutions have
varied in each country, the determination to deal wit
the problem has been common to all.

Third, the study reviews the education and training
systems of the five countries. Education and training i
very serious business in each of the five and is of a
relatively high quality. In addition, the qualifications a
results attached to the process are well regarded by ea
society. The study identifies the five as learning societ
and sees the quality of the labour force as key to their
ability to produce goods competitively. In addition, th
is a relatively even spread of skill throughout these
societies in that there are few large groups with signif
skill deficiencies. This book argues that Ireland can ta
its unemployment problem. However, it will require
imagination and courage to confront the crisis. This v
provides us with encouragement and a range of
imaginative proposals.

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